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Original Articles

THE CURE OF EARLY PARESIS*

CHARLES L. DANA, M.D., LL.D.
NEW YORK

In a paper read before this society five years ago,[1] I made a contention that it was possible to arrest, and probably to arrest permanently, certain cases of paresis when they were observed in the earliest stages and submitted to prompt and prolonged treatment. To the objection that the cases cited in illustration of my point, were not really cases of paresis, but of cerebral syphilis or "pseudoparesis," I could answer only by contending that there were no possible criteria by which we could distinguish "pseudoparesis" and certain forms of cerebral syphilis from paresis itself, except by saying that when the patients recovered, the cases were false, and when the patients died the cases were real. In the pseudoparetic cases as in true cases, we have headaches, convulsions, syncopal and aphasic attacks, disturbance of the pupillary reflexes, tremors, cranial nerve palsies, even attacks of hemiplegia, lymphocytosis of the cerebrospinal fluid, and positive reaction to Wassermann's test. In each kind of case also, we find changes in character, increased irritability, inability to conduct business affairs, defects of attention, somnolence, confusion and quick exhaustibility of the mental processes on exertion. In cases in which paresis is firmly established, with grandiose delusions, real dementia, marked facial and tongue tremors, speech defects, involvement of the pyramidal tracts. I make no claim that the disease can receive, at the most, more than a remission.

The clinical facts on which my contention is based, have been so abundant and positive since I first wrote on this subject that it seemed almost unnecessary to emphasize the point further. I am led to do so, however, because my view has been misunderstood by some who have jumped to the conclusion that I have asserted that paresis can be cured when fully developed; also, because my view as to the essential unity of nervous syphilis and parasyphilis has been so strongly confirmed by the discovery of the pale spirochete and the evidence of its activity by Wassermann and other tests in parasyphilitic conditions.

The observations of Drs. Noguchi and Moore[2] show that in general paresis and in cerebral and nervous syphilis, there is a positive reaction both to the butyric acid and the Wassermann test; also that there is a practically equal evidence of lymphocytosis in the cerebrospinal fluids. Similar results were obtained by Dr. Rossanoff[3] in his observations recently presented before the New York Academy of Medicine. Dr. Kaplan's observations presented at the same time lead to the same conclusions. It is very well established, then, that so far as the blood and the cerebrospinal fluid tests go, there is no qualitative difference in the reactions between paresis and so-called syphilis of the nervous system. There is indeed a rather stronger and more positive reaction in paresis than in the ordinary syphilis of the nervous system.[4]

The attempt to find a test which should distinguish between paresis and nervous syphilis or "syphilitic neurasthenia," has been made by Nonne and some of his followers. The most recent observations regarding the utility of what is known as the Phase I Test of Nonne failed to show that it is of any distinct value in distinguishing between these two conditions (Noguchi and Moore[2]). It follows, then, that since there is an essential underlying unity between true paresis, and "luetic neurasthenia," "pseudoparesis," "nervous syphilis," there is no reason to suppose that if we can cure one, we can not also forestall and even cure the other. This is what I assert to be possible and also, that it is not infrequently done. Over and over again, it has been my experience to see luetic patients suffering in almost the same way, nervously and mentally, and yet, in one case, after a time, a true paresis develops, and in the other case it does not. And, furthermore, it has been my experience to see patients who have, clinically, developed nearly all the signs of paresis, improved, and remained practically well for years.[5]

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* Read before the New York Psychiatrical Society, Nov. 3, 1909.

[1] Dana, C. L.: Curability of Early Paresis, THE JOURNAL A. M. A., May 6, 1905, xliv, 1413.

[2] Noguchi, H., and Moore, J. W.: The Butyric Acid Test for Syphilis in the Diagnosis of Metasyphilitic and Other Nervous Disorders, Jour. Exper. Med., July 17, 1909, abstr. in THE JOURNAL A. M. A., Aug 14, 1909, liii, 591.

[3] One of Dr. Rossanoff's conclusions is the following: "Inasmuch as the Wassermann reaction and the butyric acid reactions seem to indicate syphilis only when it exists in an active or potentially active form, their regular occurrence in general paresis would tend to prove that that disease is a manifestation of active syphilis, of activity of the *Spirochæta pallida*. While the evidence for this view is not as yet complete, it is sufficient to justify its being used as a basis of therapeutic essay." Rossanoff also cites a case which was diagnosticated general paresis. The patient, however, recovered under treatment by mercuric injections, whereupon the diagnosis was changed to cerebral syphilis. While it cannot be proved, clinical experience in other cases justifies one in saying that if this patient had not received treatment he would have died with the symptoms of paresis. Cases like this have occurred in my experience and have been potent in forcing me to my conclusions as to the nature and management of this disease.

[4] Apelt's later observations (Arch. f. Psychiat., xlvi, No. 1) only show that the "Phase I" or globulin reaction does not occur so often in so-called cerebral lues or luetic neurasthenia as it does in tabes and paresis, but it does occur, and all the serum and blood tests indicate only a quantitative, not a qualitative, difference between the conditions.

[5] Sometimes cases which present mainly the appearance of cerebral syphilis do not improve under treatment, but go on steadily to a fatal termination with all the symptoms of paresis. Two patients came under my care at about the same time, beginning in the same way. One is now apparently in active health; the other died of paretic dementia. There must, then, be some plus factor in the matter which is potent to bring about the unfavorable result. This may be inadequate or belated treatment, or it may be a more degenerate, unstable brain. The luetic poison quickly brings about hopeless toxic changes in abiotrophic cells. Paresis that is fatal, then, is that in which the luetic infection is severe and uncontrollable, or that in which the brain-cell, being congenitally weak, easily falls prey to the toxin. This is the only difference which I can see between cerebral syphilis and "parasyphilis."

The ordinary, and perhaps I should say asylum view of prognosis of paresis has been recently presented by Dr. Green,[6] who made a very careful study of 200 cases, with reference to this point. He puts the limit of the duration of the disease at five years, this occurring only in the young; and he does not speak even of the possibility of cures, or long remissions. Such a view expresses, I think, a narrow and misleading conception of the malady, for paresis exists sometimes for years before it reaches the alienist or the hospital. A writer in one of the medical weeklies, during the past summer, also states unequivocally that paresis is not only never cured, but surely and always kills, i. e., it is not even permanently arrested. This also expresses what I should term a very juvenile view of paresis. Quite appropriately this writer quotes a French novelist in support of his position, but does not, I think, get any apperception of some more serious writers. As against Guy de Maupassant, I would quote Alzheimer, who states that he has most positive evidence that paresis has remained unprogressive for many years.

I wish now to put on record the final history of the cases which I reported five years ago, as an illustration of arrest in preparetic states. The details of the early history of the cases are given in the article referred to.[1] I shall add a few further reports of cases illustrating the clinical fact which I am trying to prove, for I know that it is only by the presentation of such data, accurately and impartially given, that any conviction can be produced; the minds of many alienists, at least, seem to be absolutely fixed in an attitude of pessimism towards the prognosis of paresis in any of its stages. The cases are referred to in the order they were reported originally.

Case 1.—A broker, aged 40, had an attack of melancholia, with the somatic symptoms indicating paresis; that diagnosis was made in his case. He had tremors and Argyll-Robertson pupils, but he had shown no dementia. He improved in the sanitarium and kept well for three years afterward, at which time I reported the case. He continued well for four years more, but he lived a life of great self-indulgence. He had losses in business and finally developed genuine symptoms of paresis and died in about a year. He had had, therefore, a remission of seven years, during which he was in every respect a normal man.

Case 2.—The patient had continued well for four years from the time when I saw him, when his symptoms were marked. He had had a luetic infection twelve years before. His symptoms were those of convulsions, speech disturbance, feeble memory and depression. He has continued well, and is now in active business. It is eight years since he recovered.

Case 3.—A man, aged 34, had a speech disturbance, Argyll-Robertson pupils, facial tremor and depression to the point of melancholia. When I reported his case he had been attending to his work and was well for the last three years. I saw him again in the past year and he had continued well, so that his remission has thus far lasted eight years.

Case 4.—A lawyer, aged 30, had all the evidences of a beginning tabo-paresis. The progress of his disease was arrested, and for seven years he has been able to do his professional work with a fair degree of success.

Case 5.—A broker, aged 40, had had an infection, his trouble began with a violent epileptic attack, followed by periods of maniacal excitement. For a year he had a great deal of mental irritability and depression, and a certain degree of weakness of comprehension and judgment. He has now continued well for six years since the first attack.

Case 6.—A man, aged 43, a broker, lost all his money in Wall Street, and then tried to steal some to make good. He developed a melancholia and killed himself.

Case 7.—This was one of those types of luetic infection, followed by anxious depression or a mild form of hypochondriacal melancholia. For twelve years the patient used to have an injection of mercury, every two weeks. It is now nine years since he was under systematic treatment and he continues well.

The following further cases illustrate the preparetic state and its possible outcome:

Case 8.—T. S., aged 46, lawyer, came to me in October, 1906. There was no hereditary history of importance. His father lived to 70, his mother died at 60, of an accident. The patient was married and had three healthy children. He had contracted lues about twenty-three years before coming under my observation. He suffered severely and though he was treated, his health broke down and he had to rest from business. After his recovery, i. e., for about twenty years, he had been quite well and had seen nothing of doctors until his present illness. About three and one-half years before I first saw him he suffered from sexual weakness, which had gradually progressed till he had become practically impotent. Of late his bladder had been a little weak. Two years before coming under my care he had lost consciousness suddenly and was aphasic for two days. His capacity to speak in court had been lessened since then. One year before the time when I saw him he had an attack of severe vertigo. Since then his mental powers had been lessened. He could not work long, could not concentrate, was forgetful, and had attacks of vertigo. He was very somnolent, sleeping ten hours at night and in the afternoon. He was depressed, emotional and unable to do much work of any kind. His gait and stature were normal, speech clear, handwriting much impaired. The knee-jerks and ankle-jerks were present but uneven. The pupils were uneven and did not react to light, but did to accommodation. The left pupil was irregular in shape. The patient had no anesthesias, lightning pains or ataxia. There was tremor of the hands and the face showed distinct facial tremor. The main mental symptoms were incapacity to work, mental inadequacy, defective memory, emotional excitability (irritability and depression) and somnolence. The physical symptoms were changes in deep reflexes, Argyll-Robertson pupils, facial tremor, defects of handwriting, sexual impotence without local cause, as attested by Dr. Eugene Fuller, who saw him in consultation, and vesical weakness. It was six months before the patient improved very much but at the end of that time he was very much better, except of the sexual impotence, and the pupils. His memory was good, his somnolence and apathy better. A letter received from him recently states that he is well, nearly three and one-half years since I first saw him.

Such a case as this is illustrative of a type which I have also seen progress till all the marks of paresis are developed.

Case 9.—J. E., aged 43, single, occupation engineer. The history furnished by his family physician, Dr. Parslow, is as follows: The patient's father died of Bright's disease, at 69; the mother was living in good health; he had four sisters all living. One had epilepsy for some years, but recovered. Three aunts died of tuberculosis.

The patient was always robust; used alcohol and tobacco moderately. His habits were excellent, with the exception of sexual excess, which undoubtedly made serious inroads on the patient's vitality. About three weeks after connection, in the latter part of 1901, three hard chancres appeared on the dorsum of the penis, followed by adenitis, roseola, etc. The secondary stage ran a mild course. Mercurial treatment was faithfully carried out. About one year after the primary sore, the patient was stricken with left hemiplegia. At this time, a neurologist saw him. Mercury by inunction was pushed. The motion of the left arm was seriously impaired, but improved. After the patient was up and around, it was noticed that he would fall asleep at his work, especially after eating; he was very hard to arouse mornings, even after ten or twelve hours' sleep. As he was in charge of complicated machinery, his employers had to displace him. His friends noticed that he acted queerly at times. Dr. Parslow never noticed any delusions or hallucinations. The patient wept easily, and his mental depression was marked; his countenance changed from a bright and intelligent to a dull and stupid expression. He was given iodids in large doses, but failed to improve.

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[6] Green: Jour. Ment. Sc., 1908 or 1909.

When examined by me, he still showed some evidences of the left hemiplegia, the arm being somewhat contractured, and there were slight athetoid movements in the left hand. There was no anesthesia or ataxia. The reflexes were exaggerated, more on the left than on the right, but there was no clonus. The pupils were sluggish, but not actually of the Argyll-Robertson type. Mentally, he was simply very slow and forgetful: did not have even the ordinary school knowledge, nor could he recall the ordinary events of the day. He would fall asleep during the daytime and sleep all through the night. He had no cranial nerve palsies; no speech defects, but had a little tremor of the face and hands. He did not show any actual neglect of the person, and his sphincters were intact. He could read a little and write imperfectly. His condition had been gradually getting worse, notwithstanding large doses of the iodid of potassium, amounting to 120 grams a day.

The patient was put on hypodermic injections of salicylate of mercury, and gradually began to improve, and in about six months' time he seemed well, and went back to his work.

I saw him a year ago, five years after my first visit. He was then well mentally in every way. His speech was good, his memory clear, and he simply had some relics of his old hemiplegia.

This is a case of cerebral syphilis, but it was passing into dementia. The patient already had tremor, sluggish pupils, exaggerated reflexes. He was dull, slow, had lost his knowledge of things, was extremely forgetful, queer in actions, depressed, emotional, somnolent and partially demented.

Case 10.—E. A. M., male, aged 52, married, with two healthy children, came to see me first in May, 1906, suffering from tabetic pains. He had had a luetic infection at the age of 20, and was thoroughly treated for two years; he had had no luetic manifestations since then. He had been a hard worker at the dry-goods business. His habits were good; he used no alcohol or tobacco in excess. In 1898 he broke down with what was called "nervous prostration," and was unable to work for about six months. Two years later, in 1900, he began to have the characteristic pains of tabes, and had been treated for these symptoms and these alone, since that time.

Status in 1906: The gait was normal; there was slight Brauch-Romberg sign present, slight ataxia of the hands to the finger-nose test. Argyll-Robertson pupils, unequal in size, knee-jerks and ankle-jerks absent, tremor of the facial muscles and of the hands, no hypotonia, no anesthesia, bladder slow, sexual function very weak, tachycardia, but no valvular lesion. Mentally, the patient was irritable and quite forgetful; he had a slightly exaggerated manner, was a little *exalté*, was easily confused, could not play cards without making mistakes, could not sign his name on account of nervousness and tremor. He was somnolent during the day, falling asleep at his desk, was not able to read except for a few moments, was unable to do his work well, becoming easily confused and exhausted. There was a general change in his character, so marked that his wife came to consult me about it. He had no delusions, but was somewhat depressed.

The diagnosis, in 1906, was tabes and developing tabo-paresis. November, 1909, after several months' rest and treatment part of the time at a sanitarium, the patient returned to business and he has continued at it ever since. I have seen him at intervals during the past three and a half years. He is now mentally normal; he is no longer forgetful and can attend to his work. He can write and dictate readily. Facial tremor is gone. The tabetic symptoms are the same, almost exactly, as they were three years ago.

Case 11.—W. D., aged 30, married, denies infection. In 1902 he gradually developed a spastic paraplegia with bladder and sexual weakness, the disease taking the course of Erb's syphilitic spinal paralysis. In the fall the patient developed delusions of grandeur, and when examined by me he had all the somatic and mental symptoms of general paresis, with facial tremors, Argyll-Robertson pupils, and involvement of the pyramidal tracts. This diagnosis was confirmed by Dr. Frederick Peterson and the physician in charge of the institution to which the patient was committed. He was insane and delusional for nearly a year, but gradually improved, and has now been practically well of his mental trouble for over seven years. He has not known quite the mental vigor of his former years, and his spinal symptoms have remained about the same. The total duration of the condition is now nearly eight years.

This is a remission in general paresis, and it is not one of the class of cases on which I base my remarks. It is admitted by all that there may be long remissions in general paresis.

I could cite other cases from my notes, but I prefer to get the evidence of other neurologists, and Dr. Joseph Collins has kindly placed the two following cases at my disposal:

Case 12.—A man, aged 45, stock-broker, unmarried, was seen May 31, 1904. He had had syphilis when 23, an apparently moderate infection, treated by a prominent specialist for three years and pronounced cured. When 31 years old the patient had an attack of diphtheria; when 38, an attack of typhoid fever.

The first symptom of the present disorder, of which the patient is cognizant, occurred in 1903. He was in bathing. The propinquity of a certain person was responsible for extreme erethism, followed after a long time by orgasm. The patient experienced a profoundly disagreeable sensation in the head, and had a feeling of confusion and syncope. Following this he was in bed for a fortnight, and his physician who treated him, said that he had a heat-stroke. After that time the patient was subject to periods of profound depression. He lacked initiative, was moody, sullen, unsociable, and impotent. He frequently made mistakes in his orders and thought he had to give up business. Depression was his worst symptom. The pupils were unequal; one knee-jerk was absent, and there was distinct slowing of speech. This man took an enormous amount of mercury, by hypodermic injections and inunctions, and is to-day practically well. The physical signs remain the same, save that the speech has become distinct. He is able to transact his business as well as ever.

Case 13.—A man, aged 46, had syphilis when 21; he was rather alcoholic. When 38 years old he developed symptoms of mental confusion, associated at times with violence, but depression was his chief symptom. Gradually he became indifferent to his family, exhibited loss of self-control and was most easily excited and annoyed. Examination showed pupils that were unresponsive to light, slight tremor of the lips, tongue, and hands, and exaggerated knee-jerks. He seemed to have insight into his condition and explained his inability to work by saying that he was weak. He would frequently make mistakes in writing, however, and displayed evidences of marked forgetfulness. He was put under intensive mercurial treatment, and to-day, six years after I first saw him, he is running a store.

The question in all these cases, of course, comes up whether these patients really were suffering from paresis in an extremely early stage. Some authorities seem to take the position that we can never be sure we have a a case of paresis until the patient is dead, and the characteristic anatomic changes are found in the cortex of the brain. This anatomic test of the existence of paresis, is an unworkable one, and would make the talents and acuteness of the clinician practically of no value. Besides, it seems to me to be utterly without foundation. I do not believe that in the very early stages of paresis any anatomic change exists which could be detected by the microscope, and if we have to wait for our diagnosis of the disease until these anatomic changes occur, I can well agree that the prognosis must always be hopeless. But it is my conviction that we can recognize the malady before any appreciable changes do occur or, at least, changes which are beyond hope of repair or arrest. Let me illustrate this position by the following history:

Case 14.—A young man, a lawyer, aged 33, was infected with syphilis about eleven years before he was seen by me. He was treated for the disease continuously for two years, and after that period, every six months, for about six years. He continued his professional work, and was very successful in it, until about a year before I saw him, when he suffered from symptoms of what was thought to be neurasthenia. He was treated on this basis, and went out West, took active exercise on horseback. He improved somewhat, but then became considerably worse, and was finally brought to me in January, 1909, when he had distinctly the symptoms of paresis—forgetfulness, inability to concentrate, confusion of ideas, irritability, a good deal of mental depression, and certain almost delusional ideas regarding the way in which he was treated by his friends. Physically, he had distinct and characteristic dysarthria, tremors of the face and hands, exaggerated reflexes, and Argyll-Robertson pupils. The Wassermann test was positive. He improved a little for a time, but at the end of the following summer he was distinctly demented and delusional, and had all the characteristic physical symptoms of general paresis. These progressed, and he is now in the third stage of the malady.

The point of interest in this case is this: On inquiring carefully about the patient's earlier years, I found that five years before I had seen him, he had had an attack of mental depression, of a somewhat hypochondriacal type, such as so frequently ushers in paresis. This had occurred without special cause, and in a man whose habits were good, and who had inherited a sound constitution. I further learned that after he recovered from this depression, he had been a little different in temperament and character, a little more irritable and unreasonable, a little more egotistical and expansive than usual, his friends thinking that he was simply rather more conceited and difficult to get on with than before. But, in the light of subsequent events, it seems clear that these were the mental forerunners of his later attack, because when the later attack came on, all these characteristics were simply very greatly exaggerated. Thus, it seems that this attack of paresis can be traced back to a period of five years, during which time the patient achieved a really brilliant success in his profession, transacting his work effectively, and not suffering from any physical troubles whatever. It seems incredible that during all these years of successful professional work and social activity, he had any serious degenerative changes in the cortex of the brain, which changes are supposed to be necessary to enable one to make a diagnosis of paresis.

If the history of cases of paresis could be traced back in all instances, to the very remotest beginning, I believe that in a good many instances this prolonged preliminary period of slight mental perversion might be discovered, and, in this case I think that if treatment had been undertaken along proper lines three years before or two years before, the malady might have been kept in check.

The onset of a parasyphilis, occurring in persons who have had an infection, takes place in different ways as follows:

1. Acute symptoms of syphilitic exudates in the brain, ending promptly or later in paresis, or ending in cure, with or without mental symptoms, or ending in some deterioration with final serious cerebral vascular changes.
2. Acute mental symptoms, maniac or melancholic, ending in cure or paresis.
3. Tabetic and paretic symptoms, ending in taboparesis or in tabes with arrest of paresis.
4. Insidious mental and physical deterioration, ending in paresis.

The above initial conditions all may or may not end in paresis, depending on treatment, the constitution of the patient, and the intensity of the infection. Often they go on until nearly every symptom of paresis appears, yet they are even then arrested. The clinical phenomena, from the beginning to near the end, are produced by the same pathologic agent, and often can be controlled by treatment, even when the signs are ominously identical with early symptoms of general paralysis. This is what I mean by "cure of early paresis."

53 West Fifty-third Street.

THE SOY BEAN AS AN ARTICLE OF DIET FOR INFANTS

JOHN RUHRÄH, M.D.
BALTIMORE

The soy bean, sometimes incorrectly called the soja bean, has attracted attention from time to time as an article of diet for Americans and Europeans, but the attention has been ephemeral and but few if any attempts have been made to place the bean on a practical scientific basis as an article of diet. The composition of this bean and the facts that it is free from starch and of high protein content led me to try it as an article of food for young children and infants, and a preliminary report was made before the American Pediatric Society[1] in May, 1909.

The high protein content of this bean, about 25 per cent., probably accounts in part for the small amount of other nitrogenous food taken by the Chinese and Japanese, as the soy beans, and articles of diet made from them, are used in nearly every meal by the natives of Japan and China; and, when one takes into account the composition of the bean and the amounts eaten, it will be found that the Oriental gets a fair amount of protein daily. This general and continued use of the bean demonstrates conclusively that the protein of the bean may be utilized in the body in place of that of other vegetables and of meats. All sorts of foods are made from the beans, such as gruels, soups and porridges, but it is chiefly used in the East in the form of a cheese-like substance of which many varieties are made. It is eaten as a vegetable and picked green and used as a salad.

When one considers the American taste for meat and its great abundance in this country, there is little probability of the soy bean replacing meat by coming into general use, but it will be found of value as a source of protein when meat is contraindicated and especially when, as in diabetic diets, the patient tires of meats. As to its use in diabetics Dr. Julius Friedenwald and I expect to publish shortly a more or less extended report of cases showing its great value in this connection.

In the feeding of infants and of some young children one difficulty is to supply sufficient protein in a form in which it can be digested and assimilated. Mothers' milk is often not available, and the protein of cows' milk may not be suited, or cannot be adapted to the infant's digestion or, owing to certain diseases, may be contraindicated; and it is in these difficult and abnormal cases that the soy bean would seem to have a place.

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[1] Arch. Pediat., July, 1909; abstr. in The Journal, July 10, 1909, p. 140.

To determine the true value of the soy bean in infant feeding it is necessary to have definite knowledge of the composition of the foods prepared from them, and some simple means of preparing food of definite composition at will. As soy beans are not available in most markets, and as their cooking is a tedious process, the possibility of making gruel flour from the soy bean was taken up with a firm which makes a specialty of making gruel flours, and after some experimenting a satisfactory flour was produced. This flour was then sent to a laboratory in New York for analysis, and the following results were obtained:

	Per Cent.
Protein (N. x 6.25)	44.64
Fat	19.43
Mineral matter	4.20
Moisture	5.26
Crude fiber	2.35
Cane sugar	9.34
Non-nitrogenous extract	14.78
Starch	None
Reducing sugars	None
Polarization normal weight due to optically active substance other than cane sugar (included in proteids and non-nitrogenous extract)	7.86°

The percentage of protein in this flour is almost one-third greater than the percentage of protein in the whole beans. This is caused by removing the coarse fibrous hulls which contain little protein.

A vegetable food of such composition certainly is remarkable when compared with round of beef, medium, which contains:

	Per Cent.
Protein	19.0
Fat	12.8
Moisture	60.7

Each ounce of this soy gruel flour yields about 13 grams of protein and 120 calories, and it can be used (1) as a gruel, (2) in broths, (3) in making biscuits or muffins. It may also be mixed with cereals, barley jelly, cream of wheat and the like.

Leaving out of consideration its use in diabetes both in adults and in children, the soy bean may be found of benefit in the following conditions as well as others:

In summer diarrheas and certain forms of intestinal disturbances a weak gruel (one or two level tablespoonfuls to the quart), made from the bean or, preferably, from the gruel flour made from the bean, will be found of great value. As a rule, it is well borne and digested and rarely causes either vomiting or an increase in the diarrhea. Barley or some other cereal should be added as suggested below. Later, when the food is to be increased, condensed milk or cows' milk may be added to the soy-bean gruel to advantage.

It is also of value as a diluent for cow's milk when used in the strength of four level tablespoonfuls to the quart (protein 1.4 per cent.) and this may be employed with condensed milk to advantage, greatly increasing the protein of the condensed milk mixtures. In many cases in practice condensed milk mixtures are of great service, but one serious drawback is the low protein content of the diluted milk. By the use of the soy-bean gruel this can, in a measure, be overcome. When this mixture is being used an occasional tablespoonful of orange juice should be administered as an antiscorbutic.

In cases of marasmus and in cases in which cow's milk mixtures are not well borne the soy-bean gruel may be added as a diluent of milk mixtures, and for backward, runabout children who are below *par* the addition to the dietary of soy broth or muffins may be tried.

The caloric requirements of the young infant are about 45.4 calories for each pound of body weight during the first three months of life; about 40.9 during the second three months, and about 36.4 calories to the pound during the second half of the year. The following table shows the approximate composition and caloric value of the gruels made from the soy-bean gruel flour. Each ounce contains about 13 grams protein and 120 calories.

Amount.	Protein. %	Fat. %	Sugar. %	Calories.
¼ oz. (1 level tablespoonful to quart)	.35	.15	.08	30
½ oz. (2 level tablespoonfuls to quart)	.70	.30	.15	60
¾ oz. (3 level tablespoonfuls to quart)	1.0	.45	.23	90
1 oz. (4 level tablespoonfuls to quart)	1.4	.60	.30	120
2 ozs. to quart	2.8	1.2	.60	240
3 ozs. to quart	4.2	1.8	.90	360
4 ozs. to quart	5.6	2.4	1.2	480
5 ozs. to quart	7.0	3.0	1.5	600
6 ozs. to quart	8.4	3.6	1.8	720
7 ozs. to quart	9.8	4.2	2.1	840
8 ozs. to quart	11.	4.8	2.4	960

If 6 level tablespoonfuls of the flour be used in making a quart of gruel, a satisfactory strength, 32 ounces would contain 19 grams of protein and 180 calories, being equal in protein to the same amount of average mother's milk, but containing about 400 calories less food value on account of the low fat and sugar content—a fact very important to remember in using soy-bean gruels. The caloric value of the gruel may be increased by adding condensed milk, sugar or cereals.

(1 oz.) 4 level tablespoonfuls of barley or wheat flour will add 100 calories.

(1 oz.) 4 level tablespoonfuls of oat flour will add 115 calories.

(1 oz.) 2 level tablespoonfuls of granulated sugar will add 100 calories.

(1 oz.) 3 level tablespoonfuls of milk sugar will add 100 calories.

Two ounces of sugar in a 32 oz. mixture = 6 per cent.

COOKING DIRECTIONS

Gruels.—A quart of gruel is made by boiling from 1 level tablespoonful to six ounces of the soy gruel flour in one quart of water for fifteen minutes, adding water to make up for loss by evaporation. Salt should be added to taste.

Composition.	Protein. %	Fat. %	Carbohydrates. %
One level tablespoonful to quart...	.35	.15	.08
One oz. (4 tablespoonfuls to quart)	1.40	.60	.30

These gruels do not thicken during cooking as they contain no starch, and readily settle on standing. This may be overcome by adding 1 to 2 heaping teaspoonfuls of barley, oat or wheat gruel flour before cooking, which will add from 0.6 to 1.2 per cent. starch to the gruels, and also slightly increase the percentage of protein.

Broths.—Add from 1 to 8 ounces of the flour to one quart of beef, mutton, veal or chicken broth and boil for 15 minutes, adding water to make up for loss by evaporation; or, boil the same quantity of the soy flour for one-half hour with one quart of water, to which has been added a piece of ham, bacon or salt pork to give flavor. Each ounce of the flour will add to the broth about 13 grams of protein and 120 calories, or in percentages, add 1.4 per cent. protein, 0.60 per cent. fat and 0.30 per cent. carbohydrates. A broth made with 6 ounces of the soy flour to the quart would be half as rich in protein and fat as steak.

Muffins.—To make muffins from the soy flour, take 1¼ teacupfuls of the soy flour, ¼ teacupful of wheat flour, ½ teaspoonful of salt, 2 eggs, 1 teacupful of sweet milk, 2 rounded teaspoonfuls of baking powder, and 1½ tablespoonfuls of melted, but not hot butter. Beat well together, adding the melted butter last, and bake in gem pans in a hot oven. This will make about 12 muffins which will contain about 150 grams of protein and which will yield about 1,800 calories of which the carbohydrates produce but 280.

The soy flour, being non-nitrogenous, requires the addition of some wheat flour in making muffins, as above. The mixture of wheat and soy flours in this formula will contain about 36 per cent. protein and 20 per cent. carbohydrates, against 14 per cent. protein and from 60 to 70 per cent. carbohydrates in gluten flour. The proportion of protein to carbohydrates is from 8 to 10 times as large in the mixed soy and wheat flour as in gluten flour.

I am indebted to Mr. M. F. Deming for assistance in getting a satisfactory soy flour made.

839 North Eutaw Street.

HYPERTENSION AND THE VALUE OF THE VARIOUS METHODS FOR ITS REDUCTION

JOSEPH L. MILLER, M.D.
CHICAGO

Until comparatively recently high blood-pressure has been considered an indication for active therapy, rather than a compensatory process, demanding treatment of the underlying condition. Unfortunately our knowledge of the primary factors responsible for the condition are still far from complete. We know that certain anatomic changes, as the vascular varieties of nephritis, sclerosis of the celiac axis or its branches or of the aorta above the diaphragm lead to or are associated with hypertension. In addition, however, there are cases of hypertension in which careful anatomic studies have failed to reveal the cause and which for the present we must designate as idiopathic. Janeway[1] has called attention to the frequency of hypertension without urinary findings. The view that hypertension is a compensatory process has been suggested by many, especially by Krehl,[2] and merits the most careful consideration. Hypertension in nephritis may increase elimination through the impaired kidneys, by forcing more blood through the organ; or marked sclerosis of the arteries in other organs may lead to increased blood-pressure in the effort to supply it with the required amount of blood. Some work has already been done on the effect on elimination of lowering the blood-pressure in hypertension associated with nephritis. (Kinnicutt,[3] Rossbach,[4] Bourginski,[5] Loeb,[6]) but the results obtained have been far from uniform. Loeb in his recent careful experimental work, has shown that lowering the blood-pressure 35 to 45 points, by nitroglycerin, leads to diminished elimination of water and urinary solids.

My observations have been confined to the direct effect on systolic blood-pressure of sweating, venesection and the various vasodilators. In a majority of the cases tested the urinary findings were of such character that chronic interstitial nephritis could be diagnosed. In a few patients the urinary findings differed not at all from normal or so slightly that it is possible kidney involvement was absent; since anatomically cases of this character not infrequently show extensive interstitial changes, however, a nephritis could not be excluded; for this reason no attempt was made to classify etiologically the nature of the hypertension.

TABLE 1.—EFFECT OF NITROGLYCERIN, 1/100 GRAIN, IN REDUCING BLOOD-PRESSURE

Patient.	Initial Blood-Pressure.	Time in Minutes																			
		2	4	6	8	10	12	15	18	21	25	30	35	40	50	60	90	120	150	180	210
J. M.	168	155	145	150	150	140	...	140	...	...	...	...	...	142	...	...	150	...	...	150	150
J. R.	210	205	210	205	...	...	195	205	205	...	205	...	205	...	...	...	...	...	...	...	...
G. V. W.	235	220	210	200	...	195	...	205*	...	210	215	...	...	...	215	...	220	...	...	220	...
A. B.	165	165	165	...	...	165	...	...	165	...	...	165	...	...	...	...	...	...	...	...	...
W. L.	230	215	205	205	...	...	220	...	225	...	...	...	225	...	...	...	...	...	...	...	...
S. B.	170	150	155	153	...	152	...	...	...	152	...	...	160	...	...	...	160	...	165	...	...
H. M. S.	185	185	160	125	130	130	...	135	140	150	...	151	155	165	175	...	180	...	...	...	...
C. J.	210	210	210	210	...	210	...	...	...	210	...	...	...	...	...	...	...	...	...	...	...
M. T.	180	145	...	130	...	...	135	...	142	145	...	...	150	...	165	...	170	175	...	...	...
W. S.	230	215	205	205	...	...	...	220*	220	...	230	...	...	...	...	...	...	...	...	...	...

* Headache.

The Stanton sphygmomanometer with wide arm-band was used throughout.

Several readings were taken before submitting the patient to the test, as it was found that the first reading, in case the patient was somewhat frightened or unaccustomed to the slight pain caused by the compression, might be 10 or 15 points higher than later readings. Since toleration for the vasodilatation is comparatively easily acquired, care was taken to select patients who had not recently received medication of this character. As some samples of sodium nitrite and nitroglycerin are inert, the activity of the preparation employed was first determined by animal experiment.

NITROGLYCERIN

There is considerable difference of opinion in regard to the proper dosage of nitroglycerin. Some have given enormous doses without ill effect. Stewart[7] gave at a single dose 5 grains, von Noorden[8] 5½ grains, Hochaus[9] 7 grains, Himmelsbach[10] 2½ grains. On the other hand severe collapse has resulted from comparatively small doses, as 1/120 grain (Loeb). Initial large doses should never be given, 1/100 of a grain is the usual dose, and this amount was selected for our tests. When a fall in pressure did not occur with this amount, 1/50 of a grain was given, but without any more effect than from the smaller dose. The nitroglycerin was given in the form of 1 per cent. alcoholic solution, dropped on the tongue from a graduated minim pipette. Seven of the ten patients selected reacted to the nitroglycerin by a fall in blood-pressure varying from 20 to 50 mm. One patient gave a transitory drop of 15 mm. but within five minutes the pressure was within five points of the previous level. The two remaining patients failed completely to react, the pressure remaining unchanged.

The first evidence of fall in pressure appeared, in all but one case, within two minutes and with one exception the maximum fall in pressure was attained within ten minutes and in the majority of cases within six minutes. This maximum was maintained for a few minutes, the pressure rising gradually until within thirty-five to forty minutes it had risen to within about 10 points of the original level. After this the rise was so gradual that in one case after the lapse of three hours it still was slightly below the normal level.

As a result of the medication two of the patients complained of severe headache. These two patients were only moderately affected by the nitroglycerin, the headache appearing during the recovery from the maximum fall. Only one of these patients had suffered from headache as a consequence of his hypertension.

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[1] Janeway, T.: Pathologic Physiology of Chronic Arterial Hypertension and its Treatment, Am. Jour. Med. Sc., 1907, cxxxiii, 50.

[2] Krehl, L.: Ueber die krankhafte Erhöhung des Arteriellen Druckes, Deutsch. Arch. f. klin. Med., 1905, xxi, 1872.

[3] Kinnicutt, F.: Nitroglycerin in the Treatment of Chronic Nephritis, New York Med. Jour., 1886, xliii, 219.

[4] Rossbach, M. J.: Wirkung die Herzhypertrophie und Blutdruckerhöhung der Nierenschrumpfung Compensirend bezüglich der Harnausscheidung, Berl. klin. Wchnschr., 1888, xxii, 83.

[5] Bourginski: Lancet, London, 1885, ii, 733.

[6] Loeb, A.: Klinische Untersuchungen über den Einfluss von Kreislaufsänderungen auf die Urinzusammensetzung, Deutsch. Arch. f. klin. Med., 1905, lxxxiii, 452.

[7] Stewart, D.: Tolerance to Nitroglycerin, The Journal A. M. A., May 27, 1905, xliv, 1678.

[8] Von Noorden, C.: Discussion on Arteriosclerosis, Cong. f. inn. Med., 1909, xxi, 152.

[9] Hochaus: Discussion on Arteriosclerosis, Cong. f. inn. Med., 1904, xxi, 165.

[10] Himmelsbach, G.: Large Doses of Nitroglycerin, Med. News, Philadelphia, 1893, lxii, 14.

In none of the patients, after the use of nitroglycerin, was there a rise in pressure, as has been reported by Loomis,[11] Hewlett,[12] and Dmitrenko[13] in man and by MacNidder[14] and Miller[15] and Matthews in dogs.

SODIUM NITRITE

Sodium nitrite, on account of its prolonged action, is considered by many more satisfactory than nitroglycerin. I employed it in solution in two-grain doses. Ten patients were studied; six reacted with a fall in pressure of 30 mm. or more; one 20 mm.; two 5 mm.; and one was unaffected.

The maximum drop was 75 mm.; in this instance the effect was transitory, as thirteen minutes later the pressure had risen to within 5 points of the original level. The first effect was observed as early as four minutes in one case; as a rule, however, not before six minutes. The maximum effect was obtained in from eight to fifteen minutes. The recovery to normal was more gradual than with nitroglycerin. Headache and other untoward symptoms were never observed.

Case 2, Table 3, is interesting, as the pressure continued to fall so that after the lapse of seven hours it was 70 mm. below the original level. The day following, the pressure fluctuated between 130 and 150 mm., although for several days previous to the test the pressure had been 200 mm. Following this the patient's pressure was taken daily; within forty-eight hours it reached 130 mm. and remained at this point during the two weeks the patient remained in the hospital. When the patient entered the hospital he was having uremic convulsions, the daily output of urine averaging 600 c.c. With the fall in pressure he became more comfortable, the convulsions disappeared and the urine averaged 1,700 c.c. daily. This case has been referred to in some detail for the purpose of calling attention to the rather decided and more or less permanent reduction in pressure that may take place in this class of patients. Another point of interest is the increased urinary output with the fall in pressure, although there was no special change in the fluids ingested, or in the loss through other channels. It is scarcely possible that the single dose of erythrol had anything to do with the permanent fall in pressure, as I observed a somewhat similar behavior in a patient in whom the erythrol could not possibly have been responsible. This patient (No. 9, Table 3) reacted in the ordinary manner to the drug, the pressure the day following having returned to the previous level of 200 mm. The pressure was then taken daily without material change in its height for a week, then without any treatment except rest in bed the pressure underwent decided change so that without a period of three days it fell from 200 mm. to 110 mm., where it remained two weeks, the patient feeling very comfortable. Then without apparent cause and without any change in the treatment the pressure rapidly mounted up to 222 mm. The patient became restless and complained of headache and developed uremic symptoms. Vigorous daily sweats were begun and within 10 days the patient was much improved, the pressure meanwhile having fallen to 90 mm., and remained approximately at this point during the patient's stay in the hospital. It is questionable whether the sweats were responsible for the fall in pressure, or whether it was due to some undetermined cause. These two cases are of special interest as they are the only ones in my experience in which prolonged hypertension has been followed by normal pressure, and corresponding improvement on the part of the patient. It certainly shows how conservative

TABLE 2.—EFFECT OF SODIUM NITRITE, TWO GRAINS, IN REDUCING BLOOD-PRESSURE

Patient.	Initial Blood-Pressure.	Time in Minutes																			
		2	4	6	8	10	12	15	18	21	25	30	35	40	50	60	90	120	150	180	210
C. J.	210	210	207	208	170	...	135	140	165	185	205	205	205	205	205	...	205	205	...	...	...
H. M. S......	185	185	185	185	...	...	180	...	...	...	180	...	...	...	...	185	...	...	...	...	205
O. R.	158	...	140	...	110	...	115	...	110	...	...	110	...	115	...	125	...	135	...	...	...
L. B.	170	165	...	...	140	...	150	...	185	...	...	150	...	...	...	155	...	160	...	...	...
L. L.	235	...	230	225	...	215	...	200	...	...	...	210	...	...	...	220	...	225	...	235	...
L. B	170	...	170	162	...	145	145	140	145	...	150	...	150	...	150	160	165	...	...	...	...
W. L.	230	230	230	...	225	...	215	210	220	220	...	...	...	...	...	215	...	...	...	225	...
T. P.	185	...	185	...	182	170	...	155	...	160	155	155	155	...	...	165	170	...	...	...	...
A. B.	160	160	...	160	155	...	155	...	...	155	...	155	155	155	...	...	...	...	...	...	...
R. G.	220	...	220	220	220	...	220	...	220	...	...	...	...	...	...	...	...	...	...	...	...

TABLE 3.—EFFECT OF ERYTHOL TETRANITRATE, ONE-HALF GRAIN, ON BLOOD-PRESSURE

Patient.	Initial Blood-Pressure.	Time in Minutes																			
		2	4	6	8	10	12	15	18	21	25	30	35	40	50	60	90	120	150	180	210
L. D.	195	195	195	...	190	190	190	...	...	190	...	...	...	190	...	...	...	...	...	...	...
G. W.	200	200	200	185	...	175	175	170	162	142	...	145*	160	150	142	145	150	150	150	150	150
C. J.	200	200	200	205	...	200	200	...	200	...	...	200	...	...	200	...	...	200	...	...	...
H. M. S.	175	...	158	155	90	65	70	65	75	90	115	120	120	...	...	135*	...	140	...	140	...
W. S.	235	235	235	...	235	220	...	...	220	220	...	...	220	...	...	225	...	225	...	225	...
G. V.	205	205	193	...	175	170	180	180	185	185	190	195	195	...	195	...	...	...	...	...	...
S. O.	195	190	195	195	...	190	...	185	...	180*	...	180	185	...	180	...	...	...	185	...	205
W. W.	175	175	152	150	145	140*	138	140	140	...	...	145	160	...	...	160	...	145	...	...	...
A. L.	205	...	190	...	170*	...	170	...	180	...	175	...	...	180	...	...	180	...	...	180	...
A. B.	165	...	...	160	...	160	...	160	...	...	160*	...	...	...	...	165	...	175	...	...	...

* Headache.

ERYTHROL TETRANITRATE

Ten patients each received a half grain tablet of erythrol tetranitrate; the tablet was chewed and then swallowed. Five reacted by a fall in pressure of 30 mm. or more; two 15 mm.; two 5 mm.; and one was unaffected. The maximum fall was 110 mm.; this patient going into collapse, recovery taking place within fifteen minutes. The first effect appeared usually within four minutes, the maximum was reached within ten minutes or somewhat earlier than with sodium nitrite. The duration of the maximum effect was more prolonged then with sodium nitrite and the return to normal much more gradual. Six patients after receiving the medicine complained of severe headache, which in one instance continued for twelve hours. The headache appeared as a rule during the period of recovery from the maximum drop, came on suddenly and was intense in character. One patient had marked headache without reduction in the blood-pressure.

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[11] Loomis, H. P.: The Limitations of the Value of Nitroglycerin as a Therapeutic Agent, Med. Rec., New York, 1905, lxvii, 411.

[12] Hewlett, A. W.: The Effect of Amyl Nitrite Inhalations on the Blood-Pressure in Man, Jour. Med. Research, 1906, xv, 383.

[13] Dmitrenko, L. F.: Zur Pharmakodynamik des Nitroglyzerin, Ztschr. f. klin. Med., 1909, lxviii, 458.

[14] MacNidder, W. B.: The Action of the Nitrites on the Heart, Am. Jour. Med. Sc., 1908, cxxxv, 99.

[15] Miller, J. L.: Some Principles of Drug Treatment in Cardiovascular Conditions, THE JOURNAL A. M. A., Nov. 21, 1908, li, 1745.

we must be in drawing conclusion in regard to the effect of any special line of treatment.

COMPARATIVE EFFECT OF THE VASODILATORS WHEN TRIED ON THE SAME PATIENT

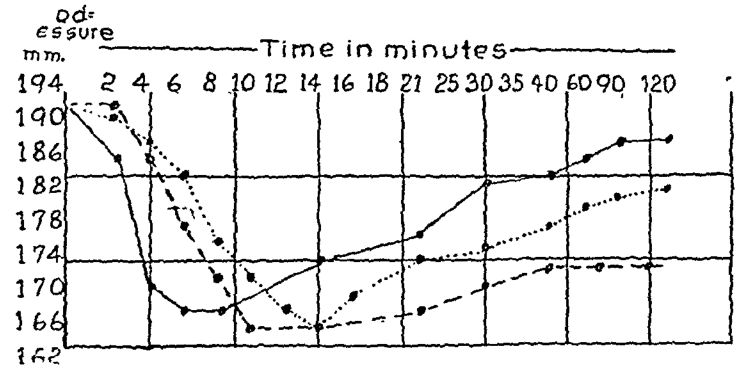
One patient, H. M. S. received on different days each of the three vasodilators. His pressure was not at all lowered by sodium nitrite, dropped 60 points after nitroglycerin and 110 points after erythrol.

Another patient, C. J., was not affected by nitroglycerin or erythrol but gave a drop of 65 points after sodium nitrite. A third patient, W. S., reacted by a drop of 30 points after nitroglycerin and 15 and 20 points respectively following erythrol and sodium nitrite. The patient who went into collapse after half a grain of erythrol was not affected by sodium nitrite.

The illustration shows the comparative action of the three drugs. This tracing was made by taking the average of each drug on the ten patients. This shows nitroglycerin most prompt in its action, erythrol second, sodium nitrite third. The degree of fall is strikingly similar in the three. Erythrol is most lasting in its effects as shown by the curve.

VENESECTION

The withdrawal of 300 c. c. or more of blood from the normal individual is followed by a transitory fall blood-pressure. Butterman[16] bled ten students, withdrawing from 200 to 480 c. c. and nine had a fall in pressure varying from 5 to 30 mm. Patients with hypertension do not necessarily react in the same manner. The effect on blood-pressure is dependent largely on the rapidity with which the blood is withdrawn. The first patient in Table 4 was bled slowly 500 c. c. from an arm vein, the blood-pressure remaining unchanged. One week later the same amount was withdrawn rapidly, a fall of 15 points resulting.



Comparative effect on blood-pressure of nitroglycerin (solid line), erythrol tetranitrate (line composed of dashes) and sodium nitrite (dotted line).

TABLE 4.—EFFECT OF BLEEDING ON BLOOD-PRESSURE

Case.	Blood-Pressure Before Bleeding.	Amount of Blood Withdrawn. C.cm.	Blood-Pressure After Bleeding.	
1	200	500	200	
2	190	500	185	
3	160	600	150	Two hours later 160.
4	185	500	170	Two hours later 180.
5	220	450	210	

As shown by Table 4 the effect of bleeding on blood-pressure was very slight and transitory.

SWEATING

In determining the effect of sweating on blood-pressure only those cases are reported in which the patients sweat profusely for at least 30 minutes. The method of inducing the sweat varied, being either by hot wet blankets, by hot bricks, or by hot air. The blood-pressure was taken just before the sweat was discontinued. As shown by Table 5, three of the five patients reacted by a reduction in pressure ranging from 13 to 20 points; in one of these cases four hours elapsed before the previous level was regained. In every instance the patient felt much better after his sweat; this was especially noticeable in the patients with uremic dyspnea, their breathing being much improved, even in instances in which the blood-pressure was not reduced. The relief obtained is not to be explained by elimination of water or urea, as the amount of the latter in a profuse sweat rarely exceeds 15 grains. A redistribution of blood is probably an important factor, the splanchnics being relieved by the better filling of the cutaneous vessels. This is analogous to what takes place in the Nauheim bath, in which the calcium and sodium salts produce distinct hyperemia of the skin, which in patients with poststernal distress is followed by relief; and percussion shows a reduction in the cardiac dullness, although the blood-pressure may have remained unchanged. Of greater interest than the effect of a single sweat was the result of daily sweats.

TABLE 5.—EFFECT OF SWEATING ON BLOOD-PRESSURE

Case.	Blood-Pressure Before Sweating.	Blood-Pressure After Sweating.	
1	160	140	Four hours before it reached previous level.
2	190	190	
3	170	170	
4	190	175	Two hours before it reached previous level.
5	185	172	

A number of patients were given one or more sweats daily for a period of two weeks or more, the blood-pressure being carefully taken each day but not immediately after the sweat. Here as with the other measures the results varied, in some the pressure remaining unchanged, in others a gradual fall in pressure took place. One patient in particular, who had been under observation for several years, the pressure during this time never falling below 210 mm. received daily sweats for two weeks, during the first five days, there was the usual transitory reduction after each sweat. From this time on, however, the pressure became permanently lower, the last five days never rising above 180 mm. previous to the sweat, and falling to 160 mm. after the sweat. Other cases with similar results could be cited. Rather prolonged benefit has resulted from temporarily relieving the heart of some of its burden in this way. It might be argued that rest in bed was instrumental in bringing about the improvement. The patient just referred to on a previous occasion was placed in a hospital on account of poststernal oppression and mild attacks of pulmonary edema was confined to bed and given the same general treatment but without the sweats. After two weeks pressure was the same as on entering. This indicates that his fall in pressure was probably due to the sweats.

The sweats, however, like all other measures, are not lasting in their effect, as within a short time the pressure returned to the previous level. Several of the patients sweated were complaining of poststernal oppression. This was largely relieved by a few sweats. It has been my experience that poststernal oppression, so-called uremic dyspnea, and mild pulmonary edema are relieved more uniformly by sweats than by any other measure.

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[16] Butterman: Einige Beobachtungen über Blutdrucke bei Kranken, Deutsch. Arch. f. klin. Med., 1902, lxxiv, 1.

[17] Carter, H. W.: Clinical Observations on Blood-Pressure, Am. Jour. Med. Sc., 1901, cxxii, 854.

Attention should be called to some of the dangers of sweating. One of these patients was sweated in an electric light cabinet, at a hospital where the attendant was accustomed to turn on the cold spray immediately after removal from the bath. When the cold spray was applied to my patient, he complained of great post-sternal oppression and slight pulmonary edema. The day following it was requested that the blood-pressure be taken just before and then during the application of the cold spray, and it was shown that the application of the cold spray caused a rise in pressure of 60 mm. of mercury. Such measures are evidently decidedly dangerous. Another patient, who had a pressure of 220, for at least four years, shortly after being removed from the bath and while lying quietly on the cot in the hydrotherapeutic room suddenly developed left-sided numbness, transitory in character and continuing only a few hours. The pressure had been taken a few minutes before the attack and showed a reduction of 25 mm. The baths were continued with this patient, his pressure finally remaining around 190; he then developed repeated transitory hemiparesis with numbness. As the patient had been entirely free from attacks of this sort excepting for one rather marked hemiparesis five years previously, and as the attacks entirely disappeared after the sweats were discontinued, they probably were responsible for the disturbance. This can best be explained by assuming that the brain could be sufficiently supplied only through the narrowed vessels when very high pressure was maintained, lowering of the pressure causing cerebral ischemia with transitory hemiparesis. The same disturbances have also followed the use of vasodilators, indicating the necessity of careful further observation on this point and the possible danger of moderate reduction of hypertension.

Assuming that the lowering of high pressure is desirable, as it may be in certain cases, these and other observations have shown that it is attained with considerable difficulty. The vasodilators are all transitory in their action, and in some cases without any effect. Sweats and venesection are of value, especially the former. With the increasing tendency to assume that the hypertension is compensatory in character, the only rational method of treatment is to remove the cause; here we reach the borderline of our knowledge, and until better informed must consider increased elimination through skin and bowels and mental and physical quiet as the most satisfactory procedure.

CONCLUSIONS

1. In moderate doses active preparations of nitroglycerin and sodium nitrite temporarily reduce the blood-pressure in the majority of cases of hypertension.

2. Erythrol tetranitrate causes a more prolonged reduction in blood-pressure than nitroglycerin or sodium nitrite, but so frequently causes severe headache that its clinical value is much impaired.

3. Headache after any vasodilator does not mean that we are getting the physiologic effect in the sense that the blood-pressure is reduced, as the headache may appear independently of any change in pressure.

4. A patient's blood-pressure may be decidedly affected by one of these vasodilators and uninfluenced by another.

5. Occasionally the blood-pressure of patients with marked hypertension may show very marked fluctuations without apparent cause.

6. A single sweat reduces hypertension less than a moderate dose of vasodilators. If sweats are given daily, a rather marked reduction of pressure, lasting throughout the day, is observed not infrequently. When the sweats are discontinued the blood-pressure soon returns to its previous level.

I wish to express my thanks to the interns at Cook County and St. Luke's Hospitals for their interest and valuable assistance in these observations.

100 State Street.

DR. LYMAN SPALDING, THE FATHER OF UNITED STATES PHARMACOPEIA

J. M. EAGER, M.D.
Surgeon, U. S. Public Health and Marine-Hospital Service
PORTLAND, MAINE

In connection with the coming revision of the Pharmacopeia, a special interest attaches to the circumstances that led to the preparation of the first Pharmacopeia of the United States of America, and to the life and works of its originator and principal author, Dr. Lyman Spalding, who in January, 1817, at a meeting of the New York County Medical Society took the first decisive action toward uniting the medical societies and colleges of the different states for the purpose of devising a national pharmacopeia. That Dr. Spalding had long had the idea in mind is evinced by the fact that on May 21, 1808, he expressed before the New Hampshire Medical Society a dissatisfaction that there were so many separate pharmacopeias for different states. The regret was uttered in presenting as secretary of the society a copy of the Massachusetts Pharmacopeia which had been sent to him by Dr. John Warren, of Boston, a brother of Dr. Joseph Warren, killed at the battle of Bunker Hill. In the United States at that period and in the colonies previous to the union, the London and the Edinburgh pharmacopeias had been in use until certain of the states adopted special works on the subject. The importance of a legalized standard for substances used in medicine had always been evident from the standpoint of public health. So long ago as the year 1542, when the senate of Nuremberg sanctioned a work of the kind prepared by Valerius Cordus, the interest of governments in standardizing drugs was recognized. In England, May, 1618, a pharmacopeia issued by the College of Physicians was legalized as the London Pharmacopeia, and by the same act a separate charter was granted to the apothecaries for the sale of drugs and medicines, these substances having been previously handled by grocers as well as apothecaries. By the same law, the censors of the College of Physicians conjointly with the wardens of the apothecaries received authority to exercise supervision over apothecary shops so as to regulate the quality of drugs. It was by such an exercise of the law under intelligent control that, not only was the preparation of medicines of recognized value regulated in the interest of public health, but the banishment from apothecaries' shelves was ordained of many popularly cherished, substances of imaginary medicinal value such as calculi, crab's eyes, and moss from human skulls.

The Edinburgh Pharmacopeia was first issued in 1699 and the Dublin Pharmacopeia in 1807. These works together with the London Pharmacopeia were displaced in 1858 in Great Britain and Ireland by the British Pharmacopeia issued under authority of a provision in the Medical Act of the General Medical Council. Unfortunately, the efforts of Lyman Spalding in the

United States did not bring about a legal recognition of the Pharmacopeia by the Federal Government.

Many incidents in the life of the man who justly may be called the "Father of the United States Pharmacopeia" show that while his interest in professional work was broad extending to many branches of medicine he entertained from an early period of his career a special interest in chemistry and materia medica, leading naturally along the line of thought that culminated in the production of the work which has become a monument to his activity.

Lyman Spalding was born at Cornish, N. H., in 1775. His father was a farmer and a soldier of the colonial and the revolutionary wars. His general education was received at Charleston Academy, a few miles from Cornish. From 1787 to 1796, Dr. Nathan Smith, the distinguished physician and educator, was engaged in the practice of his profession at Cornish and was the family physician and preceptor of Lyman Spalding who studied in his office and accompanied him on his rounds visiting the sick. In 1795, Lyman Spalding went to Harvard Medical School from which he was graduated in 1797. Nathan Smith, also an alumnus of Harvard Medical School, traveled on horseback on one occasion from Cornish to Cambridge with Lyman Spalding. Another trip of the same sort Dr. Spalding made in the company of Philander Chase, afterward episcopal bishop of Ohio. After graduation, Dr. Spalding continued to assist Nathan Smith for three terms (1797, 1798 and 1799) in his lectures on chemistry and materia medica at the then newly established Dartmouth Medical School.

Dr. Spalding first settled for practice for four months at Walpole, N. H., in 1799. In June of that same year, an opening occurred at Portsmouth, N. H., where he remained until 1812. While at Portsmouth, he was favored with the use of the garden of Peter Coues, a sea captain who had once served on the famous battleship *Royal George*. Dr. Spalding was married in 1801 to Elizabeth, daughter of Captain Coues. An interest in materia medica led Dr. Spalding to plant poppy, lettuce and scutellaria. The opium and lactucarium he prepared were used in his own practice and the scutellaria was utilized in experiments for the cure of hydrophobia. William D. Peck, afterward professor of botany at Harvard, furnished the seeds from which the plants were grown.

In 1802, Dr. Spalding was appointed post surgeon at Fort Constitution, Portsmouth, which position he retained until 1812.

In 1809, Dr. Spalding went to Philadelphia and took a postgraduate course of four and a half months studying medicine under Benjamin Rush and under Dr. Barton, a professor of materia medica who was greatly interested in botany. He then went to New York, attended lectures for one month at the College of Physicians and Surgeons, returning to practice at Portsmouth in May, 1810. In October of that year he was invited to be professor of anatomy at the Fairfield Medical School, Fairfield, N. Y. This medical school originated from the Fairfield Academy started in 1803. Lectures on chemistry were begun in 1808 and medical lectures in 1810. Dr. Spalding was the first medical lecturer at the institution and, in 1812, when the school became incorporated as the College of Physicians and Surgeons of the Western Division of New York State, he was made president and professor of anatomy and surgery. As a preparation for teaching, and especially for teaching anatomy, Dr. Spalding had in 1807, previous to his visit to Philadelphia, acted as prosector, selected by Dr. Nathan Smith, to assist the well-known anatomist Dr. Alexander Ramsey in a course of lectures given at Dartmouth and lasting for several months. Dr. Spalding's work at Fairfield necessitated a trip on horseback every November from Portsmouth to Fairfield where he remained at the college for two or three months. At the time he was made president of the institution in 1812, there were from 50 to 65 students attending lectures there. During the winter of 1811-12, Dr. Spalding arranged to have Dr. George C. Shattuck, of Boston, his intimate friend, go with him to Fairfield as professor of medicine, but owing to the inconvenience of the long trips at an inclement season and the interference with his practice at Boston, Dr. Shattuck soon resigned the position though his friendly relations with Dr. Spalding continued as long as they both lived. Dr. Spalding's connection with Fairfield College continued until 1817 when, owing to political differences between the medical faculty and the college trustees, he resigned the presidency.

Before his disassociation from Fairfield College, Dr. Spalding went to New York in 1812 to enter practice being induced to settle in the metropolis because of the death of Dr. Edward Miller whose practice he hoped to obtain. Having made the acquaintance in 1797 of Dr. Samuel L. Mitchill, of New York, Dr. Spalding's introduction into New York medical circles was, through the kind offices of his friend, speedily and happily accomplished. Other papers of which he was the author having been favorably received by the New York County Medical Society, he decided in January, 1817, to broach his plan for a national pharmacopeia. The proposition was on the whole favorably received. Such opposition as was encountered the originator of the plan managed to overcome by surrounding himself with an efficient corps of collaborators, namely Thomas T. Hewson, Eli Ives, Elisha DeButts and Jacob Bigelow. He was himself chairman of the committee on publication of which the other gentlemen were members. In the formation of the committee on publication, Dr. Spalding journeyed one year from New York to Boston, a second year from New York to Philadelphia and a third from New York to Washington. In August, 1820, his son, L. D. Spalding, aged 10 years, carried the proof of the Pharmacopeia from New York, where his father was unavoidably detained, to Philadelphia delivering the papers into the hands of Dr. Hewson of the latter city. For his son's traveling expenses and board during the trip, Dr. Spalding charged the Pharmacopeial committee $13. The total cost of getting out the first Pharmacopeia, which ultimately appeared August 15, 1820, under the name of "The Pharmacopeia of the United States of America, 1820," was $2,235. The bill for printing was about $650. The book was announced as being issued by the authority of the medical societies and colleges. It was printed at Boston by Wells and Lilly for Charles Ewer, No. 51, Cornhill. The text was in English and also in Latin, it being explained by the publication committee that the use of Latin not only in the nomenclature but in all the essential parts of the work was adopted owing to the belief the book was thus rendered more intelligible to foreigners, and more useful in those districts of the United States where the French and German languages were spoken.

Immediately on the completion of the Pharmacopeia, Dr. Spalding proposed before the New York Medical Society a revision of the code of ethics; but before he could carry this plan through he met, in the spring of 1821, with an accident which ultimately brought to an end the activities of a brilliant life. The injury from which he suffered was caused by a box falling from a height on his head while he was walking on the street. Failing of relief under the care of his New York and Philadelphia colleagues, he went to Clarkston, near Tappan-on-the-Hudson, hoping to be benefited by the tranquility of a stay in the country. At that time, the body of the British Major André, buried in 1780, was disinterred. On exhumation of the body, Dr. Spalding called attention to the fact that the hair on André's head, which was shaved at the time of his execution, was of a considerable length. This phenomenon became the subject of a contribution made in 1906 to the *Chronique Medicale,* Paris, by Lyman Spalding's grandson, Dr. J. A. Spalding, of Portland, Me., to whom I am indebted for the main facts recorded in this brief biography, and in whose possession are many valuable and interesting documents relating to the first Pharmacopeia of the United States and the career of its talented originator.

Sept. 25, 1821, convinced that he had not long to live, Dr. Lyman Spalding sailed for Portsmouth where his relatives lived. Having made the journey by water, he arrived at his destination October 12. He died Oct. 30, 1821, and was buried in the North Burying Ground, Portsmouth, N. H.

INFECTIONS DUE TO THE BACILLUS AEROGENES CAPSULATUS

WITH A REPORT OF TEN CASES

JOHN BAPST BLAKE, M.D.
Visiting Surgeon, Boston City Hospital
AND
FRANK H. LAHEY, M.D.
Assistant Visiting Surgeon, Long Island Hospital
BOSTON

Many and varied were the conjectures in times past to explain the presence of gas in the tissues and hollow organs. By some it was thought to be the result of decomposition, and by others, atmospheric air, gaining entrance either through ulcers of the intestinal tract or lesions of the lungs. The former surmise, in a certain number of cases such as pneumaturia, etc., was probably true, but those cases in which the gas supposedly entered through an ulceration and manifested its presence in the tissues by emphysema, were without doubt cases of gas bacillus infection.

In gas bacillus infections also we probably find the explanation of many of the cases of air embolus written about by the very old writers, since it has been clearly established by Dr. Welch and others that gas, as the[1] result of post-mortem development of the *Bacillus aerogenes capsulatus,* frequently occurs in the vessels and heart cavities at autopsy.

HISTORY OF BACILLUS

The *Bacillus aerogenes capsulatus* was discovered by Dr. William Welch of Johns Hopkins and its description published in an article by Drs. Welch and Nuttall.[2]

It is usually the case that two investigators are at work at the same time, without cooperation, on any original observation. This was true in the discovery of B. A. C., and in 1893 Dr. E. Fraenkel published a description of the organism causing "gas phlegmon" which was identical with the organism discovered by Dr. Welch.[3]

In 1895, Goebel, ignorant of Dr. Welch's work, published a report on the bacillus of foamy organs.[4]

E. Fraenkel in 1893 first demonstrated the relation of B. A. C. to "gaseous phlegmon," the original work of Welch and Nuttall showing only its connection with gas in the blood. Later Dr. Welch repeated Fraenkel's experiments and confirmed his results.

Clinically, to Maisonneuve and Pirogoff is due the credit for the first descriptions of the disease. Maisonneuve, writing in 1853, called the disease *gangrène foudroyante,*[5] and Pirogoff, in 1864, acute gangrenous edema.[6]

Bottini[7] in 1871 first demonstrated the transmissibility of the disease and between that time and the discovery of its origin in 1891 there was much confusion, especially with the bacillus of malignant edema and Pasteur's *vibrion septique.* To-day in some of the text-books of surgery the description of B. A. C. and bacillus of malignant edema infections are confused. Even in some of the newer text-books B. A. C. is disposed of in a few lines which leave one with no clear idea as to its relation to other infections or the degree of danger associated with it. We cannot refrain from stating here that to really appreciate and understand how rapidly events may happen and with what fatal results in gas bacillus infections, one should see such a case as No II in our series.

Since Dr. Welch's first paper on the subject, except the discovery by Dunham in 1897 that the organism produces spores, little has been added to our knowledge of its bacteriology and practically nothing has been added to the clinical side or to our knowledge in the way of treatment. One of us (Lahey) has tried to limit the extension of the process in animals by the proximal injections of hydrogen peroxid but has done so only at the cost of the animal's life.[8]

The sites from which the B. A. C. have been recovered are many. In general way it might be said that the intestinal tract and the soil are the sources from which it is most consistently recovered. Dr. Hirshberg, working in the Johns Hopkins laboratory, recovered the organism from the intestinal tracts of rabbits, dogs and swine. In 1896, Dr. Walker at Johns Hopkins recovered it from dust collected in sweeping the floors, and at the same institution Dr. Harris recovered it from the contents of an old cesspool.

Dr. Welch reported in 1896 the bacillus recovered from a bullet in the head of the tibia, producing emphysematous gangrene, and E. Fraenkel reports the recovery of the organism from a splinter of wood in a case of tetanus.[9] One of us (Lahey) recovered it from the soil of the Boston City Hospital grounds, and in our series of cases it was recovered in a scalp wound resulting from a blow produced by the runner of a sleigh in midwinter on a snow-covered street. A case of B. A. C. infection following a lion's bite has also been reported.[10]

As Dr. Welch has stated, many cases have naturally been reported from Baltimore because of the interest in the subject there. As he also states, most of the writings are by Americans, and it is also of interest to note that practically all of these are by easterners. Few if any cases to our knowledge have been reported from any of the extreme western cities where traumatic lesions, in which soil infection would be likely, must be common.

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[1] In the following lines B. A. C. will be used for *Bacillus aerogenes capsulatus.* We have in places substituted gas bacillus as a shorter term.

[2] Welch and Nuttall: Bull. Johns Hopkins Hosp., 1892, iii, 81.

[3] Fraenkel, E.: Ueber Gasphlegmonen, Hamburg u. Leipzig, 1893.

[4] Goebel: Ueber den Bacillus der Schaumorgane, Centralbl. Allg. Path. Anat., Jena, 1895, Part 5, p. 433.

[5] Maisonneuve: Gaz. méd. de Paris, 1853, p. 592.

[6] Pirogoff: Grundzüge der allgemeinen Kriegschirurgie, Leipzig, 1864, p. 867.

[7] Bottini: Gior d. r. Acad. di. med. di Torino, 1871, x, 1121.

[8] Lahey: Boston Med. and Surg. Jour., Dec. 16, 1909, p. 882.

[9] Fraenkel, E.: München. med. Wchnschr., 1899, No. 42 and 43.

[10] Jour. Med. Soc. New Jersey, 1905, i, 274.

NOMENCLATURE

Owing to the confusion attached to this disease, the names by which it has been styled are numerous. The following are some of them: traumatic gangrene; *gangrène foudroyante;* acute mephitic gangrene; phlegmonous emphysema; gaseous phlegmon; emphysematous gangrene; fulminating gangrene; *gangrène gaseux.*

B. A. C. infection seems to us the best term to apply to this disease, because it takes its origin from the cause of the disease which must remain constant.

The other terms, such as gangrenous emphysema and phlegmonous gangrene, are not as satisfactory, since they take their origin from symptoms which may be present individually from a wholly different cause.

BACTERIOLOGY

The organism is a non-motile, anaerobic, short, thick bacillus, having a capsule, as its name suggests. It resists the decolorization of the iodin in Gram's stain and grows on nearly all media in the absence of oxygen. The gas formed in its growth is said to be of the following composition: hydrogen, 64.3, CO_2, 27.6, nitrogen 8.1 parts; it burns with a pale blue flame.

The organism grows on culture media in the presence of oxygen, as has been demonstrated by one of us (Lahey) at least twenty-four hours.

CHARACTER OF THE INFECTION

The gas bacillus makes its presence known always by a definite picture, the intensity of which is influenced by the severity of the infection and its situation.

The temperature is elevated as the process develops, sometimes directly after the injury or operation, sometimes late, depending on whether the process be of the acute fulminating type or of the late, delayed type of infection. There is nothing characteristic in the pulse, being elevated as a rule in proportion to the temperature.

The first appearance of the process almost invariably is the watery, blood-tinged discharge, not pus. On close inspection may be seen small bubbles of gas coming from the wound, or very slight crepitation is felt beneath the skin at the edges of the wound. Large or small blebs varying in size from a quarter up to four or five inches in diameter may be the first evidence, causing one to be suspicious of B. A. C. infection. These blebs are covered by skin at first dark red and shading into blue or green in appearance, later becoming distinctly blue in color, and are characteristic in B. A. C. infections. Their contents are fluid, which has the characteristic foul, sweetish odor of B. A. C. infections.

If one be suspicious of gas bacillus and well-acquainted with its odor, it sometimes may be thus distinguished before any other evidence is at hand. A culture taken will show the presence of the organisms and we have then a very early diagnosis.

Pain in all of the cases has been almost entirely absent, although since there is much edema there must be considerable pressure on the nerves. This is probably explained by the fact that the toxins of B. A. C. which have such a necrosing action may interfere with the conductivity of the various nerves in the tissues surrounding the process. Delirium is usually a late symptom, appearing after the process has become generalized and being present until death.

Nausea, vomiting and the constitutional symptoms so characteristic of other infections are not usually present in B. A. C. infections until the process has become very severe and as a rule beyond control. This seems explainable by the fact that the process extends mostly by direct extension and not through the lymphatics or blood channels. The lymph glands in pure infections are not enlarged and tender as in streptococcus and staphylococcus infections. There is no reddening and induration of the lymphatic channels and as a rule no development of fresh processes situated apart from the original infection. The process ascends a limb as a match burns with the lighted end held down, or, on the trunk, spreads out as a grass fire, extending between muscle planes, beneath peritoneum, along the path of least resistance, separating these layers by the distending action of the gas as it is formed.

Fascia, tendons and ligaments resist the infection strongly and as a rule are not affected by it. Muscle seems to be its most favorable site in which to flourish. At the original site of the wound we find the lacerated tissue soft, moist and of the consistency of pulp. Beyond this the tissues are pale and water-laden, containing small amounts of gas and apparently being prepared to assume the pulp-like consistency of the tissues at the original site of injury.

The foregoing description is that of an unmixed infection due to B. A. C. From this we may have the intermingling of the two processes—B. A. C. and staphylococcus or streptococcus infections—in any degree or proportion. The process may be a frank staphylococcus or streptococcus infection with occasional bubbles of gas and B. A. C. in small numbers, as in the lacerated wound of the scalp in this series, or may, starting as a simple ischio-rectal abscess, as has happened in the hands of one of our friends, begin to show itself as a B. A. C. process, rapidly changing from the predominance of the pus process to the complete overshadowing of it by the B. A. C. infection and resulting in death. In a case of this character the pus process remains local or practically so, with a tendency to recovery, while the B. A. C. process extends out into the tissues in the form of a practically unmixed process, which explains its severity.

In the cases in which the bacilli are limited to the wound, which contains a mixed process, it seems to us in cases we have seen much more amenable to treatment. But even in these cases the bacilli may remain locally present for some time, being active enough to produce gas, but not extending as is shown in Case 3.

TREATMENT

The treatment is always operative. Sometimes the operation will consist in the removal of stitches and allowing the wound to gape widely. Again it will require multiple incisions and sometimes we must resort to amputation. There are other things to do in the way of treatment but these are procedures which should be used as measures secondary or as adjuvants to the results obtained by one or more of the operative procedures. These secondary measures consist of frequent irrigations or spraying of the infected wound with hydrogen peroxid, the delivery of oxygen constantly into the wound from a catheter connected with an oxygen tank, or the submerging of an extremity in a constant soak.

First, to consider the indications for one or more of the operative measures. Concerning the opening of wounds widely there should be no doubt or hesitancy. In the presence of a fairly well-grounded suspicion the wound should be laid widely open and irrigated with hydrogen peroxid while a decision is made as to what more radical surgical treatment shall be instituted.

The other two methods, multiple incision or amputation, are not so easy to choose between.

Amputation must always offer the greatest chance of recovery, but also presents the disturbing thought that an extremity may have been sacrificed when multiple incisions might have accomplished the same result. On the trunk multiple incisions of course must be the only operation, no other being applicable.

In this series of ten cases four patients were treated by amputation, two died and two recovered. Two recovered under treatment with hydrogen peroxid, the wound being opened and treated locally; one recovered with oxygen delivered into the wound and one patient died with only local, non-oxidizing agents applied. In two cases treated by multiple incisions there was one death and one recovery.

Statistics as to operative results can be of little value since it is evident that the patients who recover under opening of the wound and secondary treatment with some form of oxygen would naturally be the mild cases, while amputation statistics would show many deaths, both because it is applied only in the extreme cases and because the operation itself, particularly when secondary to a compound fracture, etc., is of grave danger.

From this or from any other series of cases one cannot draw conclusions as to what is the best form of treatment in an individual case. In most cases it is safe to say that multiple incisions should be used only in the very early cases, and always with amputation in reserve if the former operation does not check the process. Amputation is practically always to be selected for the acute, rapidly extending process. While not always so, it is usually true that amputation must be done before the third day of the disease to be successful in saving life in a majority of the cases.

CASE REPORTS

CASE 1.—May 1, 1908, L., aged 27, single, a sailor; is said to have had arm run over by a freight car. Long lacerated wound on inner side of arm; elbow joint open; much laceration; radial artery pulsating. Wound cleaned, irrigated, loose fragments of humerus removed, drainage in front and back, sutured. Amputation refused by patient.

May 2, 1908: Dressing removed on account of bleeding, and wound packed.

May 4, 1908: Few bubbles of gas escaped from wound and crepitus beneath skin. Culture +.

Operation.—Arm amputated at junction of upper and middle third. Stump packed and left open.

June 1, 1908: Discharged, having had an uneventful recovery.

CASE 2.—March 30, 1907, K., aged, 51, was run over by freight car, causing traumatic amputation of left leg 4 inches above ankle, and right foot at mediotarsal joint. Both wounds full of dirt and grease. Chopart amputation on right and amputation at point of election on left.

April 1, 1907: Temperature has remained elevated, patient delirious; wound dressed; left leg shows typical sweetish, foul odor; bluish green discolorations over wound; blebs filled with bloody serum having very strong and characteristic odor; crepitus and gas bubbles from wound. Culture +. Patient removed to operating floor and reamputation at middle of thigh by transfixion. Following operation temperature fell to normal, but patient failed to recover from the shock of the second operation and died in two days. No organisms were recovered from wound and stump was apparently healing by first intention.

CASE 3.—March 20, 1906, L., aged 34, married, derrick fell on leg, causing compound fracture of tibia. Wound cleaned and put in plaster shortly after entrance; circulation of foot poor; moderate laceration of tissue.

March 21, 1906: Patient comfortable; circulation in foot still poor; plaster split.

March 22, 1906: Wound dressed; no evidence of sepsis, save bloody serous discharge of peculiar odor; afternoon temperature 103; pulse 130; bluish discoloration of entire leg; greenish area over upper part of tibia surrounding one of the wounds; gas escapes from wound on pressure; audible crackling sound of escaping gas on pressure. Culture +.

Operation.—Mid-thigh amputation. Subcutaneous tissues gangrenous.

March 24, 1906: Gas bubbles and positive cultures.

March 26, 1906: Few gas bubbles escape at each dressing on pressure.

March 30, 1906: Gas bubbles present up to to-day when, peculiarly, the temperature has reached normal.

April 19, 1906: Discharged. Convalescence uneventful up to this date.

CASE 4.—March 20, 1906, Mrs. W., aged 32, was admitted for gluteal abscess with deep fluctuation and suppurating abrasion. Incision and drainage; no free pus found but subcutaneous tissues apparently necrotic.

March 23, 1906: Wound dressed and edges found edematous and necrotic; gas escapes from edge of wound on pressure; culture +; patient delirious; former incision enlarged and again no free pus found.

March 25, 1906: Wicks have been changed; wound irrigated with hydrogen peroxid; no gas in tissues beyond wound, but general condition of patient failed, delirium came on and she died.

CASE 5.—Jan. 2, 1907, L., aged 52, stevedore, was struck by an electric car, knocked down, and sustained compound fracture at middle of left humerus. Cleaned, bones approximated and sutured.

Jan. 6, 1907: Wound dressed; large amount of bloody fluid (serum) evacuated. W. B. C. 17,400; temperature has remained 102 since operation.

Jan. 7, 1907: Dressed this forenoon; crepitus about wound and few gas bubbles from wound; wound widely opened and oxygen delivered into wound constantly. Culture +.

Jan. 10, 1907: Still slight crepitation and few bubbles; cultures ++.

Jan. 14, 1907: Uneventful recovery, except for a slight transient delirium.

CASE 6.—February 14, C., aged 27, single, teamster, was thrown from a pung on snow-covered street and dragged, runner striking head and causing long lacerated scalp wound. Wound full of hair and dirt. Wound cleaned and sutured loosely with rubber dam drain.

February 18: On the day following operation wound was dressed and a slight odor, sweetish and foul in character, detected. A few bubbles of gas came from wound. Smear from wound showed gas bacilli. Wound was laid open widely and irrigated frequently with hydrogen peroxid.

February 22: No gas from wound for past two days. Irrigations of hydrogen peroxid continued. Following this temperature came to normal and uneventful recovery ensued. Culture for gas bacillus negative on February 23.

CASE 7.—Aug. 5, 1906, L., male, aged 15, was struck by an automobile, causing crush of foot with large lacerations about ankle and lower leg. Wound cleaned, irrigated, curetted and sutured, with drainage.

Aug. 6, 1906: Dressed on day following operation (because of possibility of gas bacillus). Wound fairly clean; some discoloration of flaps distal to wound and similar discoloration between second and third toes; swelling somewhat increased.

August 7, 1906: Owing to foul, sweetish odor and discharge of bloody serum, multiple incisions were made about wound. Tissues were found to contain gas in small amounts and with but little extension. Culture +.

Following this, recovery uneventful.

CASE 8.—June 27, 1907, P., aged 56, painter, fell from staging (30 feet), sustaining fracture of lower end of radius and compound dislocation of ulnar. Large amount of dirt in joint. Extensive laceration of tissues. Wound enlarged, thoroughly cleaned and irrigated; rubber dam drain inserted and wound sutured loosely.

June 28, 1907: Plaster split; no odor; temperature 99.2 F. in forenoon; 101.8 in afternoon.

June 29, 1907: Foul, sweetish odor from wound; wound dressed; blue blebs, slight crepitation and gangrenous tissue found; removed to operating floor where multiple incisions were made. No gas was found but all of the tissues of the arm were pale and watery in appearance. Wounds were washed out with hydrogen peroxid.

June 30, 1907, patient died.

Case 9.—April 24, 1907, Mrs. H., aged 51, fell from a balcony on the outside of the house and received a compound fracture of the femur, with dirt in wound. Wound cleaned and sutured with drain and plaster spica employed. String attached to drain for removal.

April 26, 1907: Drain removed by pulling on string.

April 27, 1907: Foul odor of gas bacillus, elevated temperature and delirium. Wound dressed; gas escapes from wound; crepitation on palpation; characteristic blue blebs; odor so strong that it could be smelled throughout the ward. Operation advised; mid-thigh amputation; patient died on table.

Case 10.—X., a man, aged 66, was admitted to the Boston City Hospital for diabetic gangrene of the right foot; the condition had existed for five months and was complicated by a considerable sepsis; there was discoloration of the entire foot. At entrance, urine contained 3.5 per cent. of sugar and acetone bodies. Under a starch-free diet the urine became worse, but improved under a moderate diet. After two weeks mid-thigh amputation was recommended and accepted. It was done under spinal anesthesia, and was entirely free from post-operative shock. For sixty hours the convalescence was uneventful; then the temperature rose to 102 F., the wound being clean. Eighteen hours later there was a slight oozing of bloody fluid from the stump, and soon after this bubbles of gas were observed in the exudate, the stump becoming enormously swollen with extreme rapidity, discoloration and large blebs also developing rapidly. All sutures were removed and the wound left gaping, but the patient died within twelve hours from the time the gas bubbles were discovered.

A careful and thorough autopsy confirmed the findings made when the bubbles were discovered; the gas bacillus was found almost everywhere; the intestinal tract contained enormous numbers of them. The spinal canal did not show the slighest trace of irritation in any part. The precise route of contamination of the wound was not determined.

CONCLUSIONS

From the foregoing and other cases which we have seen, not here reported, it appears that in the majority of instances interference must be undertaken before the third day to make a favorable outcome probable. This is particularly true of the pure infections.

It is true, at least in this series of cases, that a lack of response to the infection in temperature is suggestive of a fatal result.

The grave danger of complete plaster-of-Paris dressing is only too well ilustrated in Case 9. The dressing in all soil-infected wounds should not be an impervious covering and should be one which makes constant observation of the wound easy.

Laborers must be particularly liable to this infection, because they are exposed so often in the course of their occupation to soil-infected wounds.

While the disease is relatively common it is certain that in only a small percentage of soil-infected wounds do gas bacilli develop.

What is the explanation of this? It seems to us that the condition is similar to that in the rabbit, whose blood is well able to take care of large quantities of living gas bacilli, injected into the blood-stream; but in this same rabbit, if a leg be broken and then injections made into the blood stream, a B. A. C. process may be started at once around the fracture. The same conditions seems true in the human being, that normal human tissue is able to successfully resist the presence of a considerable quantity of gas bacilli. While this cannot be proved by injection into the blood-stream, as in the rabbit, its corollary is established by the fact that many of the lacerated wounds acquired by workmen in the streets and from soil elsewhere must contain gas bacilli (since it is prevalent in the soil, as we know), yet but a small percentage of them show gas bacillus infections. This suggests that the tissues when not badly injured can and do by their own vital resistance render harmless the B. A. C. present.

This is further evidenced by the recoveries following amputation, even when some gas bacilli remains in the stump. What happens in this case is that the manufacturing site or nest of gas bacilli, that is the badly lacerated tissue at the point of fracture or injury, which is the culture media, is removed by the amputation at one sweep, changing the fight from one in which all the odds are on the side of B. A. C. (Since new bacilli are constantly sent out in increasing number from the nest at the point of injury to take the place of dead ones) to a contest in which conditions are reversed. Healthy tissue, even though it contain the gas and numbers of the bacilli in their process of spreading, is well able to successfully resist them, as is shown by several reported cases and the cases in this series, in which the patients have recovered although gas remained in the stump after amputation.

Furthermore, it seems but reasonable to suppose that in the cases infected with B. A. C. the blood retains a destructive, or at least a resistant, action to their presence. At autopsy we find large amounts of gas in the vessels, sufficient to produce fatal results from air embolus if present during life. Yet in B. A. C. infections we find gas only in the part affected, the process being always a local one, extending by direct progression. If the bacilli find their way so rapidly into the vessels after death it is but reasonable to assume that the reason that they do not do so during life is that conditions there are unfavorable for them.

How long the gas bacilli may live in the circulating blood we cannot say. Their presence in the circulating blood without producing gas has been definitely demonstrated at Johns Hopkins Hospital.[11] It seemed probable to us that Case 10 was infected through the blood from his own intestinal tract, from which enormous numbers of B. A. C. were recovered. This seems not at all improbable, particularly since Dr. Brewer of New York has demonstrated the liability of the kidney to septic infarcts when rabbits are fed bacteria and when one of the kidneys is exposed and only such gentle injury inflicted as would result from the tapping of the organ with the handle of a knife; and more so when it is realized that B. A. C. develop more easily and rapidly in the presence of sugar, this patient, No. 10, being a diabetic.

In Case 4 it would seem probable from the situation of the lesion that the infection might well have come from the intestinal tract by direct contamination in the feces, which we know as a rule contain numbers of gas bacilli. Knowing of another rectal case not reported, an ischiorectal abscess which was opened and became infected with B. A. C., resulting in the patient's death, we advise that all ischiorectal abscesses be protected from feces as carefully as possible.

That B. A. C. infections do not take place more commonly in this condition seems strange but is explained, we believe, by the fact that the abscess cavities are usually left widely open and that they are lined with a layer of granulating and walling-off tissues as a result of the abscess, both conditions being unfavorable to the development of B. A. C.

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[11] Gwyn, N. B.: Bull. Johns Hopkins Hosp., 1899, x, 134; Cole: Bull. Johns Hopkins Hosp., 1902, xiii, 234.

In Case 3 it is interesting to note that temperature remained elevated as long as gas was present, although no other symptoms were apparent.

In the one case in which the process was mixed, Case 6, the infection was a mild one. This is in agreement with the majority of opinion that mixed infections are less severe than pure ones.

In these cases, five were compound fractures. The presence of soil in the wound was noted in six cases. The soil was that of a door-yard in two cases, from the dirt about a railroad in two, from street dirt in two, and probably in a third case. In one the injury was acquired on a street covered with snow.

Case 10 is interesting because of the existence of diabetes, as any medium is made more favorable for B. A. C. growth by the addition of sugar. Reasoning on this basis it would seem that diabetics should be more susceptible to the infection.

Plaster dressings were applied in three cases, two of which died. In both cases which died the process would have been discovered earlier had some other dressing than plaster been applied. If plaster dressings are applied they should be split, and in any injury in which B. A. C. would be likely to occur, that being any soiled and lacerated wound, the dressing should be thoroughly inspected for odor, watery discharge, emphysema, and particularly for bubbles of gas. This will mean inspection of the closest kind, for a small bubble of gas can easily escape the eye of one not on the lookout for B. A. C. infections.

To consider the B. A. C. infections as rare is a mistake. We have published in this article only unreported cases, but a much larger number of cases exists in the Boston City Hospital records. Many cases have been reported by other men and the condition certainly cannot be called uncommon. The complication must have occurred though unrecognized, or at least unpublished, in the practices of many general practitioners, particularly in the experience of those seeing many accident cases.

One should feel that the possibility of its occurrence is so definite that it should be guarded against. We are both of the opinion, from the cases we have seen, that it is liable to occur and will occur if given half a chance in a lacerated, soil-infected wound.

The best results are to be obtained, we believe, through prophylaxis, early diagnosis and prompt interference.

By prophylaxis we mean thorough cleansing of all lacerated or crushing wounds, careful cleansing and removal of dirt in soil-infected wounds, opening of the wound to the air as far as is feasible, instead of tight suture, even with drain, thus securing aerobic conditions which are unfavorable to B. A. C. The application of a dressing which allows the entrance of air to the wound as far as possible and dressings which may be easily removed for inspection of the wound, are also important. By early diagnosis is meant the careful watch for the signs before described, frequent cultures from the wound when in doubt and reopening of the wound where there is any question of gas bacillus infection.

By radical treatment we mean amputation in the fulminating type, with the stump left widely open; multiple incisions in the milder type, with careful and frequent inspection, so that amputation may be resorted to if the former treatment is not effective.

In regard to hydrogen peroxid and oxygen gas we can make no definite statement, but we do advise the use of the former in the stump after amputation and in the wound after the flaps have been opened.

We are of the opinion that B. A. C. infection is not a well-understood process in the minds of the average physician. We trust that we may have stimulated an interest that may result, should the infection occur in the experience of any hitherto unfamiliar with it, in its early discovery and successful treatment.

AN INQUIRY INTO THE CAUSATION OF NON-SPECIFIC URETHRITIS

JOSEPH HUME, M.D.
Lecturer and Clinical Instructor in Genito-Urinary and Venereal Diseases, Tulane University of Louisiana
NEW ORLEANS

Gonorrheal urethritis has held the attention of the medical profession so strongly from the earliest times that comparatively little interest has been taken in other forms of urethritis. I have endeavored in the following notes to classify certain of the non-specific urethritides, and to offer a hitherto unmentioned explanation of their origin, as well as that of certain forms of prostatic, vesicular, and vesical infections, the etiology of which have been more or less obscure. The material utilized as a basis for these observations has been obtained from 1,524 cases occurring in private practice.

I have rigidly excluded from the discussion all gonorrheal cases, all cases of chemical or mechanical irritation, urethritis ab ingestis, and all the rarer forms of urethritis attributed to general infective processes such as mumps and typhoid, or diathetic conditions like gout and rheumatism. It has also been necessary to exclude all cases of relapsing gonorrheal urethritis, and all cases of post-gonorrheal urethritis, i. e., discharges occurring in individuals who are gonococcus-free, but who may be subject to irregular attacks of subacute urethritis. Many rare and unique cases of urethritis reported by Guiard, Nogues, and others have failed to stand criticism because of a history of a previous gonorrhea, so that all such patients were excluded from this series. It is so common an occurrence to see the flare-up of a chronic post-gonorrheal urethritis without any apparent cause that it was deemed best to exclude such cases from the discussion.

I have in addition ruled out of consideration all cases in which there has been the slightest history or suspicion of gonorrhea unconfirmed by microscopic examination at the time; likewise all cases of patients who have been either injected, irrigated or instrumented. It was also thought advisable to exclude all cases of urethritis occurring in men over 40, owing to the possibility of an error in the history of the patient's earlier sexual experiences.

There remains for consideration a comparatively large class of patients who present themselves to the physician with a discharge following connection more or less definitely, or who accidentally notice a glueing of the meatus, or who complain of premature ejaculations or frequent night emissions. Again there are those who come to the physician with marked cases of prostatitis, vesiculitis, or cystitis, denying any and all probable antecedent cause, and in whom the examiner is unable to find gonococci, stone, stricture, etc., to account for the existing condition. It is this class of cases which I have thought deserving of a closer study with a view to a better understanding thereof.

It is exceedingly difficult to make a proper classification of the urethritides from the fact that any classification will differ according to whether the viewpoint be clinical, bacteriologic, or pathologic, but as it is important to have some working scheme, the one in the center of this page may suffice.

The etiology of the non-gonorrheal or non-specific groups is rather difficult to grasp at first, and it is only after a number of such cases have been seen and studied that the whole picture is clearly presented to the mind. The irregularity of the incubation period, the marked variation in inflammatory reaction, the changes in the urethra, and the varied microscopic picture of the discharges all tend to indicate differences too great to be explained by difference in virulence of organisms or suitability of soil. The fact is forced on one that there are two general types, at least, of non-specific urethritis; the one acute in character, following sexual congress *after a regular incubation period*, unattended by lesions indicative of chronicity, tending to run, like a true gonorrhea, a well-marked clinical course, and favorably influenced and easily cured by proper treatment; the other, chronic in nature from the start, sometimes noted after sexual congress, but with an incubation period markedly irregular—so much so that it cannot be said to have a true incubation period—presenting always urethral lesions which from their pathologic picture must have *taken months or years* to develop, and showing no tendency toward self-limitation, but characterized by resistance to treatment, and at times not amenable to cure. The former class I have termed cohabitative, sexual or infective urethritis; the latter auto-infective, or autogenous urethritis, both classes belonging to the nonspecific group of urethritides.

ANTERIOR URETHRITIS

ACUTE				CHRONIC					
Gonorrheal.	Non-gonorrheal.		Aseptic.	Gonorrheal.	Post-gonorrheal.	Non-gonorrheal.		Aseptic.	
	Cohabitative, sexual or infective.	Auto-infective, or autogenous.				Cohabitative, sexual or infective.	Auto-infective or autogenous.		

The acute forms of urethritis, non-gonorrheal in origin, are fairly infrequent, only 11 or 0.022 per cent., being encountered in 493 cases of urethritis of all types. The following case is quoted as being typical of this class.

Case 1.—*Patient.*—Male, white, aged 27, single. Last connection five days before examination (Sept. 22, 1908); previous one three weeks before. This forenoon he noted a slight white discharge. No pain or burning on urination.

Examination.—Healthy male. Moderately long foreskin, worn back. Meatus showed slight puffiness and hyperemia. Moderate grayish-white discharge (pus-cells in numbers, few epithelial cells, large number of Gram-positive cocci closely resembling gonococci with plain stain). First glass, hazy with shreds. Second glass, clear and no shreds.

Treatment and Course of Disease.—Zinc sulphate, 2 grains to the ounce, alternating with silver nitrate, 1/12 per cent., and daily anterior irrigations with 1 to 4000 permanganate of potash.

September 23: Discharge less. First, clear with fine shreds; second, normal; 28 French sound in anterior urethra. No infiltrations.

October 6: Daily ℞. Bare mucoid discharge. First, clear, few shreds. Second, normal.

October 18: No discharge for five days. First and second normal. Prostate and vesicles normal to feel and to microscope. Treatment stopped

October 25: No discharge. Urine normal.

December 2: Regular life. No discharge. Urine normal.

Such cases have an incubation period rather similar to that of a gonorrhea, five to nine days, but in the nonspecific case it is apt to be somewhat longer, as the infection is milder in character. In 11 cases the shortest period was four days, the longest twelve. These cases always show evidence of acute inflammation, as indicated by a reddened or puffy meatus, with a congested appearance of the urethral mucosa. The discharge is yellowish, but rarely frankly yellow, and only fairly profuse, seldom approaching the amount seen in gonorrhea. The discharge shows numbers of some organism usually alone, or else markedly predominant. The first glass of urine is more or less hazy with shreds, the second clear. An immediate urethral examination will not show any infiltrative changes. It must, however, be borne in mind that a urethral examination done at the close of such a case may possibly show fine infiltrations, whereas if done at the inception no infiltrations would be found. It is also to be remembered that such cases rapidly become chronic, and if first seen at such a time they may easily be misinterpreted. These cases are truly infective ones, they are acquired by direct contact during connection, and I will speak of them as cohabitative, sexual or infective.

The infecting organism was studied in 11 cases of this type. In 5 cases Gram-positive cocci alone were noted; in 5 cases bacilli alone were found, 4 Gram-positive, 1 Gram-negative; in 1 case both cocci and bacilli were found. The coccus is usually the *Staphylococcus albus*; the Gram-negative bacillus was the colon bacillus. The Gram-positive bacillus has not been recognized by name. It occurs as a diplobacillus, lanceolate shaped, with the rounded ends approximated.

It is unfortunate in this respect that more work has not been done to ascertain the pathogenicity of various organisms found in the female vagina. Gurd[1] has indeed recently investigated the flora of the female genital tract with great thoroughness, but no attempt was made to prove on anthropoids the pathogenicity of organisms found, which experiments, if looked into, might still further clear up this aspect of the subject, and prove of assistance in the future.

Closely analogous to such cases, on the surface, are those of patients who come into the physician's office purporting to have some acute urethral infection dating back to this or that connection. An examination shows little if any meatal puffiness or redness; the discharge, which is white and scanty, shows a variable and mixed bacterial character; the urine is clear with shreds or at the worst hazy with shreds, rarely definitely cloudy, as in true acute urethral inflammations. Such cases are often denominated "strain," or else attributed to masturbation, or to connection with an unclean woman, whatever that may mean. The patient is given some injection; in a few days the discharge has ceased, and the patient is considered cured, and the injection a cure-all. But if the examiner will make a careful urethral examination of such cases he will discover, in almost every instance, more or less marked infiltrations in the urethra, especially in the penile portion about the middle third. A urethroscopic examination will show the characteristic picture of a glandular or infiltrative urethritis. These facts being so, it must then be granted that this "new" case is not new at all, but merely a new observation on the part of the patient of an infective process which must have been already established for some time to produce such marked pathologic changes in the urethra itself.

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[1] Gurd: Jour. Med. Research, xviii, No. 2.

It is interesting to glance at two lines of argument which support the view that such urethral conditions are very often unobserved until some particular suspicion or coincident effect calls the patient's attention to the slight discharge; first, the overwhelming proportion of such cases among medical students, who are notoriously given to a minute inspection of both subjective and objective phenomena; second, the statement of Waelsch[2] who refers to an intractable form of non-specific urethritis which he has found only in medical men. There is surely no reason why medical men should have a monopoly of a distinct urethral disease; it is, however, certain that they are apt to be better observers and more critical of their own bodies than the ordinary layman, so that what would pass as insignificant with the latter would not so easily escape the self-examination of the former. Out of 59 cases of urethritis in medical students in my series 14, or 23 per cent., were non-specific in nature, whereas out of 434 cases in private practice only 27, or 0.062 per cent, were non-specific. And of these 27, 9, or one-third, were in physicians. Roughly speaking, non-specific urethritis is discovered four times more frequently in medical men than in laymen, simply because of the mild disturbances it causes. Often this condition can be found in patients who are not suspicious of any urethral trouble, but who consult us for varicocele, circumcision, etc., and I have noted it in men who have never had sexual connection, or in others who have always used condoms.

The so-called incubation period of this type of urethritis is naturally vague and uncertain, and as stated in 30 cases was found to vary from one to thirty days. The meatus rarely presented signs of acute inflammation. The discharge is slight, grayish or white, with varied bacterial contents, never presenting large numbers of one organism either alone or decidedly predominant. The first glass of urine is usually clear, but shows fine floating shreds; the second glass is normal. And, to complete the picture, an immediate urethral examination will show more or less marked infiltrations. The prostate may likewise be involved, though presenting no symptoms. It is to be noted that though chronicity is the marked characteristic, yet these cases, with the necessary concomitant conditions, may show temporary "flare-ups." In addition, it is perfectly possible for a patient to acquire the first type described, acute non-specific urethritis, on a urethra already damaged in the manner outlined above.

What the origin is of this low-grade infection, and how it is brought about are natural questions that arose during a study of the cases. After many factors were looked into and cast aside, it appeared somewhat probable that perhaps a long foreskin with its necessary accompaniment of moisture and dirt might account for the condition. A glance at the following tabulation shows the condition of the foreskin in 30 of these cases.

Long foreskin	18
Medium foreskin	5
Short foreskin	2
Circumcised	1
Not noted	4

To ascertain the normal condition of the foreskin in childhood, as possibly bearing on the chronic forms described above, 91 successive male children were examined at the Touro Infirmary and Charity Hospital, through the kindness of Dr. King Logan. Their ages were from 2 months to 12 years. The following facts were noted.

Foreskin (91 Cases)	
Phimosis	15
Long	69
Medium	1
None	6

Meatus (59 Cases)	
Reddened	34
Normal	12
Not seen	4

Adhesions of Foreskin, 56; Discharge from meatus, 9.

Almost without exception the prepuce is long, often phimotic, adhesions are present, and there is about the meatus spreading peripherally over the glans penis an area of congestion, more or less red and of a width approximately dependent on the extent of the adhesions. When the adhesions are broken up this superficial congested area disappears rapidly as a rule. The statements of many pediatric specialists concur in the belief that a long foreskin with marked adhesions is the overwhelming rule in the male baby. I was unfortunately unable to find in the young male a definite case of marked urethral discharge, non-gonorrheal, but the conditions were not favorable in that most of the children had just urinated recently, thereby preventing any accumulation of discharge. I found, however, several cases, 9 in number, in which there was slight urethral moisture containing epithelial cells, few pus cells and bacteria; indeed, it cannot be hoped to find a definite non-specific urethritis except once in many hundred cases. In this connection it should be borne in mind that an adult may show a medium foreskin which when he was a child would have been a long one.

This condition of a long foreskin encourages heat, moisture, and uncleanliness around the meatus, all favorable factors for germ development. Jungano[3] recently, and many others before him have shown how many organisms are habitually present about the meatal lips and the glans penis, in addition to those in the normal urethra; with such factors tending to encourage germ development and urethral congestion it is quite possible and highly probable that many urethras are not able to withstand bacterial invasion and become permanently infected with organisms of low pathogenicity. Likewise it is not unlikely that some of the obscure joint lesions and kidney infections of childhood may owe their origin to such a source. A consideration of these facts makes it rather probable that in the young male all the conditions are present which allow a local infection to start; that in some cases it does so start, is unnoted, and becomes extremely chronic and slowly produces changes in the urethral mucosa, submucosa and glands. Later on after puberty, following intercourse and the attendant alcoholic irritation, the passage of very acid urine, etc., the mind becomes suspicious, attention is centered on the penis, a slight discharge is found, and the patient presents himself to the physician for an examination.

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[2] Waelsch, L.: General Syphilis without Primary Manifestation and Professional Syphilis in Medical Men, München. med. Wchnschr., April 27, 1909; abstr. in THE JOURNAL A. M. A., June 5, 1909, lii, 1895.

[3] Jungano: La flore de l'appareil urinaire normale et pathologique, Paris, 1908.

A careful examination of such a patient discloses the condition described above, for which I have tentatively suggested the term auto-infective or autogenous urethretis, by which is meant the type which invariably develops spontaneously in one's self, in contradistinction to that variety which follows intercourse, therefore designated cohabitative, sexual or infective urethritis. This form is much more common than the sexual variety, being noted 30 times, or 0.063 per cent., in 493 cases of urethritis; it is about three times as frequently met as the sexual or infective type. A striking fact is that I have never yet noted its occurrence among Jews, who are without foreskin practically from birth.

To illustrate this condition more fully the following case is quoted as typical of this type of urethritis:

Case 2.—*Patient.*—White, male, aged 20, single; denied all previous venereal diseases. Discharge noted morning of day of examination (April 24, 1908); some burning on urination noted day before. Last connection eight days before examination; previous one four weeks before.

Examination.—Healthy male; long foreskin; meatus medium red, perhaps a little puffy. Slight watery, grayish discharge, showing pus, epithelial cells, few cocci and diplobacilli. First urine, clear with few fine shreds; second, normal.

Treatment and Course of Disease.—Anterior irrigation with 1 to 4000 potassium permanganate.

April 25: Barest moisture (pus and epithelium, very few cocci and bacilli). First, clear, with few fine shreds; second, normal. Treatment, anterior irrigation with 1 to 4000 potassium permanganate.

April 26: No moisture; first, clear, with 2 to 4 shreds; second, normal; 23 French sound showed very numerous and marked infiltrations, especially in the first three inches of the urethral canal.

June 2: Patient said that he was well and discontinued reatment. Urine normal, both glasses.

The question as to whether the organisms of the auto-infective or autogenous type of urethritis are infective for other urethræ is interesting, and I have found one case which is very suggestive. Two young men, never before infected, A and B, had connection with the same woman on the same night, A two hours before B. B came into my office a few days later, October 8, 1908, with a fairly profuse yellowish discharge, showing a Gram-positive diplobacillus, lanceolate-shaped, in great numbers. The first urine was hazy, with shreds, the second, normal. His urethra and prostate were normal, and the case ran the typical course of an anterior urethritis, being cured in fifty days. He told me of A, and I advised him to tell A to watch out for signs of infection. A came to me eleven days after B's first visit, October 19, 1908. For two days he had noted a slight smarting on urination. He presented a long foreskin, and a medium red meatus, with a slight white discharge containing epithelial and pus cells, and large numbers of lanceolate-shaped, Gram-positive diplobacilli, with various other urethral bacteria. These diplobacilli were similar to those found in B's case. The first urine was slightly hazy, with numerous shreds, the second normal, prostate normal. Three days later his urethra was examined, and marked anterior infiltrations found. The patient was treated for three months and a half before he was cured. A stated that he would never have thought of any trouble unless he had been cautioned by B.

The prognosis of the cohabitative or sexual form of urethritis is good, and as a rule the patients are easily cured. Many of the so-called gonorrheas which are cured by a few injections are unquestionably unrecognized cases of this type. The prostate may occasionally become involved, but other complications are rare; I have, however, seen epididymitis occur.

The most effective treatment for this type consists of injections of silver nitrate, 1/12 per cent. to ⅛ per cent., increasing in strength as the inflammatory process declines, combined with daily irrigations of potassium permanganate in ascending strengths. The proteid silver salts are good, but I prefer to use the nitrate as giving better results. As the case progresses toward a cure an astringent injection is alternated with the silver, until the latter is finally discarded. The duration of treatment varies from three to four weeks, the longest time being about three and a half months in cases in which the prostate is involved. There are some forms, however, due to an infection with a slender bacillus, which appear to be more amenable to the action of the zinc salts, perhaps comparable to the results of zinc in conjunctivitis due to the Morax-Axenfeld diplobacillus.

On the other hand, the prognosis of the auto-infective or autogenous form of urethritis is not so favorable. The infective process has been going on for many months or years, inflammatory changes have become well marked, and there is often a well-developed fibrosis in localized areas of the urethra. In addition, the prostate is often infected, and it may, and usually does take months to effect a cure; in fact, in many of these cases it is impossible to restore the mucosa and submocosa to a normal state. Too often a slight urethral moisture remains, or else recurs several months after treatment has been stopped, and prolonged observation of such patients for several years has led me to believe that few if any are positively cured, a slight discharge containing pus cells being present if the urine is held for six or eight hours.

This type of cases is best treated along the following lines: circumcision; massage of the prostate, followed by intravesical irrigations and hot rectal douches, if the prostate be involved, as shown by the presence of pus in the prostatic secretion rather than by digital examination of the gland; dilatation of the urethra in combination with urethral irrigation; injections. Of the latter silver nitrate in strengths of 0.25 per cent. to 0.5 per cent. offers the most hope in the severe cases; it should be kept up for one or two weeks, then giving place to a course of urethral dilatation. It is advisable to give a long course of treatment subdivided into short periods with an interval of rest in between. Time is an essential element in the treatment to enable the infiltrations to soften and be absorbed. Ointments applied locally to the urethra would apparently be useful, but I have not found them very efficacious; in sluggish cases, however, it is well to try ichthyol or balsam of Peru, in full strength or with equal parts of lanolin.

I would again insist on the fact that many such patients may be apparently cured; they may have normal prostate, normal urine, no discharge, and a urethra without perceptible infiltrations; yet if observed for six to eighteen months they will almost always show a slight discharge, a few shreds in the urine, and infiltrations of the urethra now again perceptible, indicative of the fact that the infecting agent has not been entirely eradicated. Again, there are other cases, belonging to the same general class, in which even a temporary cure cannot be effected, a slight discharge and marked infiltrations persisting in spite of all treatment. I have kept such patients under treatment and observation for two years and more, until I was convinced that with our present methods a cure was impossible.

In many cases belonging to this class the patients are made neurasthenic, and spend many hopeless years because this fact is not known. With experience it does not take long to ascertain the possible limit of improvement of each case; when this point is reached the patient should be told the truth as to the condition, and he should be advised to discontinue the treatment, but to report at intervals for an examination.

I have purposely avoided any discussion of the aseptic type of urethritis; there is no doubt of its existence; it is always associated with infiltrative lesions of the urethra, and is probably dependent on deep glandular infections. It is most probable that when more work has been done on the anaerobic flora of the urethra we shall have a much better understanding of this class of cases.

It is highly probable that the urethral condition which is brought about by the form of auto-infective or autogenous urethritis will readily account for the variability which so many cases of gonorrheá show. Considering first cases of gonorrhea only, and for the sake of clearness those limited to the anterior urethra, it is well known how many differences they show in their clinical course; some heal kindly, and complete resolution follows; others tail off in a most exasperating chronicity, though gonococcus-free; others flare up with acute exacerbations time and again. If, however, one comes to realize that these first anterior gonorrheas occur, some on a virgin soil, others on a field already damaged by less virulent but none the less persistent organisms, it will soon be clear that the virulence and chronicity of the gonorrhea may well be determined by the presence or absence of pre-existing inflammatory changes in the urethra. I have therefore come to the belief that the variation from the normal which must exist in many urethras accounts for the chronicity and tediousness of many a first gonorrhea.

There are certain cases of prostatitis and vesiculitis which occur in patients who give no history of venereal infection, or of instrumentation, or of any other source of contamination. Such an infection must be explained, as some do, as a result of normal masturbation, or as a descending infection which unaccountably fastens on the prostate alone, leaving the rest of the genito-urinary tract untouched, or as a direct infection from the rectum or blood-stream, or, finally, on the assumption of a low-grade ascending infection, which, giving little discomfort to the patient, was unnoted or passed over by him at the time. I firmly believe, as a result of clinical observations, that many such cases follow some antecedent urethral infection, which becomes extremely chronic, dies down or out, but not until after it has infected the sexual glands. It is certainly common enough in gonorrhea to see an infected prostate with normal urine and no symptoms of trouble. It is pretty certain that some cases of cystitis in women are brought about by a direct ascending infection from the vagina. I have noted involvement of the prostate in 6 out of 11 patients who presented themselves for circumcision or varicocele with no urinary symptoms whatsoever; in these cases the urine was clear, symptoms were entirely absent, and the condition was found only by routine examination of the urinary tract as a prelude to treatment. This form of infection must be taken into account in considering the etiology of senile hypertrophy of the prostate.

The following cases are quoted in detail because of their instructive features in this connection:

CASE 3.—*Patient.*—Male, white, aged 24, single; never had stayed with a woman in his life. In the summer of 1904 he had an attack of malaria, and at that time noted burning on urination and a thick white discharge. Shortly after this he was laid up with a slight epididymitis. He had had no

TABLE 1.—COHABITATIVE AND AUTO-INFECTIVE TYPES CONTRASTED: 4 CASES EACH

Age.	Foreskin.	Meatus.	Incubation.	Discharge.	Bacteria.	Urine.		Urethra.	Prostate and Vesicles.	Treatment.	Duration of Treatment.	Result.	Remarks.
						1" glass.	2" glass.						
					COHABITATIVE, SEXUAL OR INFECTIVE								
21	Medium....	Puffy and hyperemic.	5 or 21 days.	Medium yellowish	G. P. coccus..	Hazy with shreds.	Normal.	Normal.......	Normal.......	Injections and irrigations.	26 days.....	Cured	
19	None........	Pink and puffy.	4 days..	Medium yellowish.	G. P. diplobacillus.	Hazy with shreds.	Normal.	Few fine infiltrations.	Normal.......	Injections and irrigations.	30 days.....	Cured	Circumcised 6 years ago. Few fine infiltrations noted at end of case.
19	Short.......	Congested....	7 days..	Medium, white, watery.	G. P. coccus..	Hazy with shreds.	Normal.	Normal.......	Prostate badly involved, much pus.	Massage, injections and irrigations.	2½ months..	Cured	One year later. No discharge; 1" and 2" glasses normal.
22	Not noted..	Pink and puffy.	12 days.	White..........	G. P. coccus..	Cloudy with shreds.	Normal.	Not noted....	Normal.......	Injections and irrigations.	23 days.....	Cured	*Staphylococcus albus* in pure culture. All connections for past 4 months with same woman.
					AUTO-INFECTIVE OR AUTOGENOUS								
26	Very long..	Reddened....	....	Mucoid..........	Bacilli and cocci.	Clear; few shreds.	Normal.	Marked infiltrations.	Normal.......	Dilatations and irrigations.	8 weeks.....	Cured	Never with a woman in his life.
20	Long.	Slight pinkness.	8 days..	Watery, yellowish.	Diplo-bacilli and cocci.	Clear, with shreds.	Normal.	Marked infiltrations.	Not noted....	Dilatations and irrigations.	4 days......	Cured?...	Discharge ceased — certainly not cured.
22	Very long..	Puffy, not red.	2 or 9 days.	Watery, white...	Rare cocci...	Hazy with shreds.	Normal.	Dense infiltrations.	Not noted....	....	....	....	Not treated.
19	Long.	Normal.	3 or 17 days.	Scant, white......	G. P. cocci, diplococci and bacilli.	Clear, with shreds.	Normal.	Marked infiltrations.	Normal.......	Injections, irrigations and dilatations.	3½ months.	Cured	Examined 2 years later; 1" and 2" glasses normal.

treatment except internal medication. At the time of examination (March 13, 1905) the discharge and burning continued; he urinated every two hours in the day and twice at night. Erections were good and night emissions frequent.

Examination.—This showed a long, adherent foreskin, chronic balano-posthitis, and masses of smegma could be squeezed out of pockets in the preputial cavity. The meatus was red and contained a thick grayish-white discharge showing pus, cocci and bacilli. The right globus minor was somewhat thickened and hard. First, second, and third glasses were cloudy (pus) with shreds. Prostate was a little enlarged, increased in density, and tender; right vesicle thickened, left normal. Secretion from prostate and vesicle was dirty white, showing under the microscope all pus with cocci.

Treatment and Course of Disease.—Patient was circumcised, many adhesions being broken up. He was treated for five months and discharged cured. He was reexamined in June, 1908, three years later; no discharge; meatus normal. Urine, both glasses normal. Prostate and vesicles normal to feel; secretion white, containing spermatozoa, lecithin, granule cells, with rare leucocytes.

January, 1910: No trouble. No discharge. First and second glasses normal.

Case 4.—*Patient.*—Male, white, aged 26, single; never had stayed with a woman in his life. He complained of frequent night emissions, two or three per month. He had worried about them only lately, and then only because he did not understand them.

Examination.—This showed a very long foreskin, a congested, purplish area about the meatus with some redness of the urethral mucous membrane; slight watery discharge showing epithelium, pus, few cocci and bacilli. First urine had mucoid haze with shreds; second clear. Prostate showed involvement to feel and on examination of secretion by microscope; 20 French sound showed very dense, large, well-marked infiltrations in penile urethra.

The patient was treated and cured.

A thorough study and understanding of the above facts will lead one to a more definite comprehension of the etiology and pathology of non-specific urethritis, and will point the way to a more exact knowledge of the causation and development of certain obscure cases of genitourinary infections; at the same time it will enable one to explain logically the exceeding variability in the reaction of certain urethrae to gonorrheal invasion.

In Table 2, 41 cases are tabluated as regards special points to which attention should be called:

TABLE 2.—SPECIAL POINTS IN 41 CASES

COHABITATIVE OR SEXUAL (11 Cases)		AUTO-INFECTIVE OR AUTOGENOUS (30 Cases)	
Foreskin		*Foreskin*	
Long	4	Long	18
Medium	1	Medium	5
Short	2	Short	2
Circumcised	1	Circumcised	1
Not noted	3	Not noted	4
Urethral Infiltrations		*Urethral Infiltrations*	
Marked	0	Marked	14
Fine	3	Fine	10
None	2	None	0
Not noted	6	Not noted	6
Prostate		*Prostate*	
Involved	2	Involved	10
Normal	6	Normal	14
Not noted	3	Not noted	6
Bacteriology		*Bacteriology*	
Bacilli and Cocci:		Bacilli and Cocci:	
Scarce	0	Scarce	7
Numerous	1	Numerous	2
Numbers not noted	0	Numbers not noted	10
Bacilli (numerous):			
Gram-Pos.	4	Bacilli (numerous)	1
Gram-Neg.	1		
Cocci:		Cocci:	
Numerous	5	Numerous	2
Numbers not noted	0	Numbers not noted	5
(All Gram-Pos.)			
Grouped Cases		*Total Urethritis*	
Private practice	1,400	Private practice	434
Medical students	124	Medical students	59
Total	1,524	Total	493

Non-Specific Urethritis

Private cases	27	(.063 per cent.)
Medical students	14	(.23 per cent.)
Total	41	(.083 per cent.)
(a) Sexual or Infective.		
Private cases	7	
Medical students	4	
Total	11	(.022 per cent.)
(b) Auto-infective or Autogenous.		
Private cases	20	
Medical students	10	
Total	30	(.06 per cent.)

CONCLUSIONS

In closing I feel warranted in offering the following conclusions:

1. Non-specific urethritis, acute and chronic, is a definite clinical entity.
2. Many of the non-specific cases of urethritis are not of a sexual origin.
3. A long foreskin may be the possible starting-point of those types of non-specific urethritis not due to connection, because it produces urethral congestion in early life, and favors moisture and germ growth.
4. The variation and chronicity of many cases of gonorrhea are due to pre-existing urethral changes of a non-specific character.
5. The existence of chronic non-specific urethritis offers a feasible explanation of the origin of many cases of obscure prostatic or vesicular infection.
6. The practice of circumcision should be encouraged as a means of preventing autogenous urethral infection.

724 Baronne Street.

ANIMAL EXPERIMENTATION IN RELATION TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

JOSEPH ERLANGER, M.D.
MADISON, WIS.

IN THREE PARTS

INTRODUCTION

There are but two paths along which the advance of medical science and art can be pressed; they are observation and experiment. The two lead to the same goal; both are beset with difficulties or even with obstacles which for the time being are, or may even forever be, insurmountable. In any case it is essential, in order to ascertain beyond peradventure that either of the paths has led us to our goal, to show that the two lead to the same place. Still, to have threaded one of the paths successfully usually assures an easy and early approach by way of the other. Indeed, the opening up of one path often leaves the finding of the other merely the matter of a single trial. When this is the case we are apt to lose sight of the fact that actually the goal has been reached by an advance pressed along both pathways.

The bearing of these remarks on the subject-matter of this paper becomes obvious when it is recalled that as subjects of observation and experiment the medical investigator employs both man and the lower animals. The method of pure observation may be employed in the study of both, whereas man can be employed as the subject of an experiment only with his full knowledge and consent and in such a way as to inflict neither bodily discomfort nor pain, except the not infrequent instances in which the experimenter himself serves as subject of the experiment. But experiments of the kind that can be made by the experimenter on himself are, for obvious reasons, limited in number. There remains, then, a whole host of experiments that must be performed on the lower animals, if medical knowledge is to be advanced. This statement is true, it matters not what view we may hold as to the justifiability of experiments on animals; it is nevertheless called into question by certain misinformed or misguided persons who argue that experiments with the lower animals cannot serve to throw any light on the functions, either normal or abnormal, of the organs of man. This objection, though untenable as it stands, contains an element of truth. It is true that inferences, based on animal experiments, as to the functions of the organs of man must be carefully guarded. When, however, they are checked by critical observation of, and painless experiment on, man, inferences from animal experiments have, we believe, led us to the greater part of our practical medical knowledge and the part which is considered the most valuable.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Fourteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, the circulation of the blood, protozoan tropical diseases, etc.

Scientists, then, are all agreed that the findings of the laboratory must be in full accord with the matured conclusions of bedside observation if they are to be entitled to enrolment in the category of established medical truth. Furthermore, it is equally true that bedside observation can lead to the truth only when it is checked by experiment, which in this case may, however, be made for us by the slow and precarious methods employed by Nature. It is just at this point that it becomes difficult to determine what part of medical advance along any line is due to the achievements of the animal experimenter and what part to keen observation, at the bedside, of experiments performed by disease and trauma. However this may be, all who are in a position to know are of the opinion that they are mutually helpful.

Indeed, they are mutually helpful in more ways than one. A very large part of the best clinical observation has been, and is being, made by clinicians who have had the opportunity of witnessing and performing animal experiments during their student days, or who have actually been engaged in research involving animal experimentation. The fruit of clinical observation naturally depends very largely on the attitude of mind which the clinician brings to bear on his cases. Our system of medical training recognizes this fact in requiring that the student be given every opportunity in the laboratory to develop the critical way of contemplating things that must be employed when interrogating Nature.

It is not merely a coincidence that the periods of most rapid medical progress (Hippocratic, Alexandrian, Galenic and modern) have also been the periods of greatest activity in the pursuit of animal experimentation or its equivalent. Furthermore, it has not been merely a matter of chance that in each of these periods the most highly esteemed men (Hippocrates, Erasistratus, Galen, Harvey) were at one and the same time practitioners of medicine and animal experimenters, actually or in effect; and that at least two of them (Hippocrates and Galen) were the greatest clinicians of their times as well as the authorities of clinicians for centuries after them.

They were the authorities not alone in the particular fields in which they had conducted animal experiments, but, as a matter of fact, in every field of medicine. Is it not, therefore, permissible to assume that the relatively small number of experiments, for the performance of which they managed to snatch a few moments here and there from their clinical activities, gave to them the attitude of mind that made them the fountain-heads of all medical knowledge during the long periods of medical aridity that succeeded them?

In order, then, to give a just valuation to the debt which the physician of to-day owes to animal experimentation, account must be taken, not only of the results capable of more or less direct application to the practice of medicine, but also of such observations and experiments on man as are stimulated by experiments on animals and of the attitude of mind of the physician toward his patient determined by the scientific, and therefore critical, atmosphere surrounding his activities.

I. THE DISCOVERY OF THE CIRCULATION

The story of the discovery of the circulation of the blood has been so frequently told that it will not be necessary to review it here in any great detail. Indeed, my only reason for relating it at all is to attempt to show the part played by animal experimentation in its unfolding. The limited scope of this paper compels me to confine myself to the most important phases of, and contributions to, the subject.

The earliest recorded views on the physiology of the blood-vessel system that are entitled to serious consideration are those of Hippocrates. There seems to be no good reason for believing that Hippocrates actually performed carefully planned experiments on animals. The statement is, however, made[1] that Hippocrates (the name stands for a period rather than an individual) probably acquired his knowledge, among other ways, through observation of votive offerings, of slaughtered animals, and of injuries received in war and peace. These are tantamount to animal experiments; they are chance operations on living animals. Such slow and uncertain methods of acquiring knowledge must, however, have led to the development of a far from perfect theoretical scheme of the blood-vessel system. I call attention here only to his observation of pulsation in the aorta and pulmonary artery with the obvious comment that this phenomenon could have been revealed only by viewing the artery exposed in the living animal.

Whether Aristotle performed experiments on animals seems to be a matter of dispute.[2] In any event, however, his views are probably mainly the outcome of reflection based on dissection and the accumulated knowledge of his time. And in many respects, it might be added, Hippocrates was nearer to the truth than Aristotle.

The contribution of Praxagoras to the physiology of the blood-vessel organs consisted in drawing more clearly than had Hippocrates the distinction between the arteries and veins, and in showing that "the phenomenon of pulsation, previously regarded as a common attribute of arteries and veins, really belonged only to the arteries. . . . They were, furthermore, distinguished by the nature of their contents; for, while the veins were still considered as receptacles for blood, the arteries, according to the new view, contained no blood, nor any liquid material, but only an invisible gas or air."[3]

I have not succeeded in discovering the source of Praxagoras' views on the pulse; it is, however, evident that they could have arisen only from experiments or chance observation on living man or animals. His erroneous conclusions that arteries contained air must have

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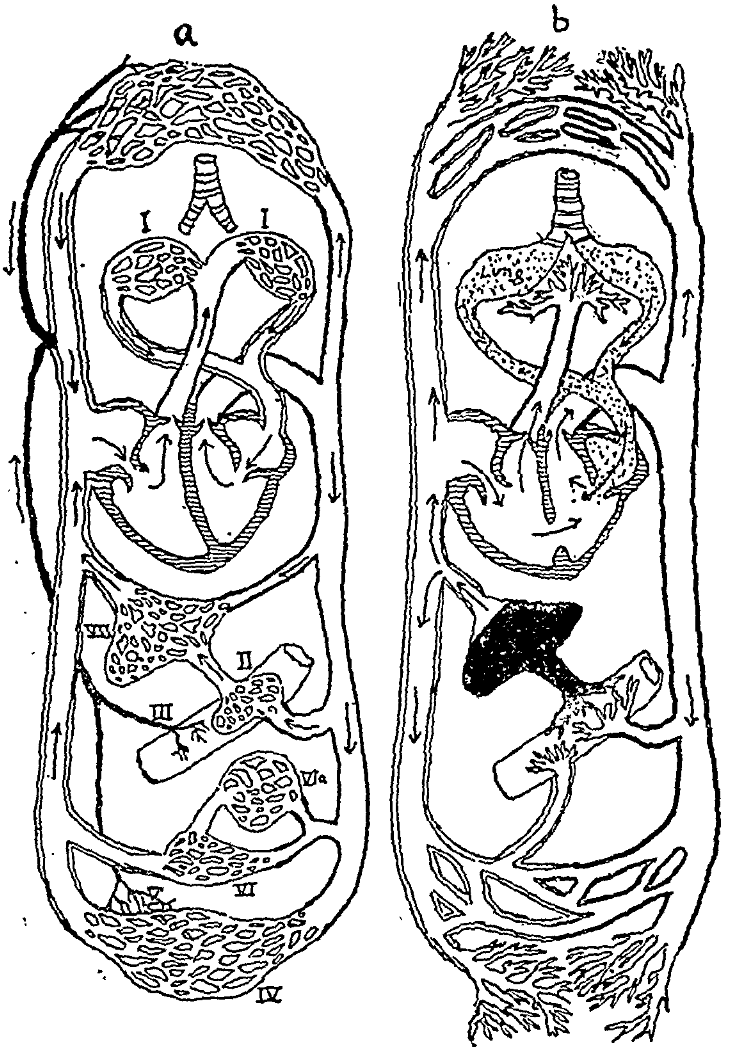
1. Neuburger and Pagel: Handbuch der Geschichte der Medizin. Jena, 1902-5, i, 236.
2. Nicolai: In Nagel's Handbuch der Physiologie, Brunswick, 1909, i, 674; and in Neuburger and Pagel Vol. i.
3. Dalton: History of the Circulation, p. 38.

been drawn from observations on dead, not on living animals.

The next important contributions to the physiology of the blood-vessel organs seem to have been made by Erasistratus. They were based on experiments on animals[4] and on dissection of the human body. He seems to have been unduly influenced by the views of Praxagoras: the veins still contain nourishing blood, the arteries "vital spirits." Experimentation, however, forced him to proceed one step in advance of the views then held and admit the existence of "synanastomoses" of the arteries and veins, which, however, allowed blood to pass into the arteries only under abnormal circumstances, as in plethora and when an artery is opened.



Scheme of the circulation (Nicolai); (a) according to Harvey (modified); (b) according to Galen (reconstructed). Heart-wall shaded; arteries heavily contoured; veins doubly contoured; capillaries lightly contoured; lymphatics (nutriment) solid black; air dotted; I, lung capillaries; II, intestinal capillaries; III, chyle capillaries; IV, somatic capillaries; V, lymph spaces; VI, renal capillaries; VIa, glomerular capillaries; VII, liver capillaries.

Erasistratus also describes accurately "all of the cardiac valves and their action. According to him, they provide the mechanism by which the heart alternately takes in and expels blood on the right side and pneuma on the left."[5]

There now occurs a gap of almost 500 years in the progress of medical science and art, and there seems to be no evidence that careful animal experiments were made during this interval. The gap is closed by the activities of practically a single individual, Galen, through whose animal experiments, coupled with keen clinical observation, the physiology of the blood-vessel system was advanced another step.

Galen's main contribution to this subject consists of the proof that the arteries contain blood and not pneuma. Two experiments are offered as proof of this fact:

1. "Expose an artery of a living animal. Then open it by applying to it, as you choose, either the point of a writing style, a needle, a slender scalpel, or any similar instrument that will make a narrow cut. Blood will at once exude. The artery, then, must have contained blood and not pneuma.

2. "The artery of a living animal is exposed by dissection, and, after isolating it with a cord on two sides and then opening it in the middle, we showed it to be full of blood."[6]

Galen's conception of the blood-vessel system is very well illustrated in the accompanying diagram (b). The nutriment taken up from the alimentary canal is converted into blood in the liver. Thence it is conveyed by the veins to all parts of the body, including the lungs (through the pulmonary artery), for the purpose of nourishing them. "The venous blood was dark, thick, and rich in the grosser elements of nutritive material." From the air carried through the pulmonary vein to the left ventricle from the lungs the vital spirits were extracted and added to the blood.[7] Or, according to another account,[8] the blood, traveling back and forth in the pulmonary vein, transported the pneuma from the lungs to the left ventricle. "The arterial blood (then) was thinner, warmer, bright-colored and, above all, spirituous." "As every organ is supplied with both arteries and veins, it can absorb each kind of nutriment in due proportion for its own needs." "The pulse was due to a 'pulsatile force' resident in the walls of the artery, but derived by them from the heart, in which it also existed. This was a force of active expansion, dilating the artery and attracting fluids into its cavity; while its subsequent contraction caused an expulsion of its contents in the same degree. Thus the diastole of the artery was an active, and its systole a passive movement."[9]

These views of the blood-vessel system prevailed until the Renaissance. At this time the dissection of the human body, which previously had been forbidden, led anatomists first to question some of the Galenic physiologic doctrines and then to seek the answers in the living animal. Thus was animal experimentation revived after a 1,200 years' sleep which began with Galen's death.

Vesalius, the father of anatomy, showed experimentally that the pulse was not dependent on the uninterrupted connection of the walls of the arteries with the heart, as Galen had maintained, since the peripheral part of a severed artery, connected with the heart by means of a cannula, still continued to beat.[10]

The next step was the refutation of the view handed down from the earliest times that the blood passed through the ventricular septum from the right to the left side, and the substitution in its place of the idea of the lesser circulation. Servetus, religious reformer and physician, was the first to surmise this course of the blood from the right to the left ventricle. In a book entitled "Christianismi Restitutio," dealing almost exclusively with questions of religion, there is inserted a strikingly clear description of the pulmonary circulation. No mention is made of animal experiments, and it is usually stated[11] that Servetus jumped to the conclusion which Realdus Columbus subsequently proved by means of experiments on animals and probably in complete ignorance of the views of Servetus on the subject.[12] It should not be forgotten, however, that Servetus' argument was based on the then known physiology of the circulation, which was the result of animal experimentation. In his experiments Columbus "always found the arteria venalis (pulmonary vein) containing no air, but full of arterial blood and yet not pulsating.[13] Columbus, it might be added, was thoroughly imbued with the importance of animal experiments in the elucidation of the functions of the blood-vessel system. "One learns more in a day from the vivisection of a dog," he says, "than from feeling the pulse or from reading Galen for months."[14]

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[4] Nagel: Handbuch der Physiologie, p. 674.
[5] Dalton: History of the Circulation, p. 57.
[6] Galen: Quoted by Dalton, p. 72.
[7] Dalton: History of the Circulation, p. 77.
[8] Nagel: Handbuch der Physiologie, p. 675.
[9] Dalton: History of the Circulation, p. 78.
[10] Nagel: Handbuch der Physiologie, p. 677.
[11] Dalton: History of the Circulation, p. 122.

There seems to be some difference of opinion as to whether Cæsalpinus is to be credited with making any contribution of real value to our knowledge of the blood-vessel system. Whereas, Dalton,[15] on the one hand, maintains that the main purpose of Cæsalpinus was "to defend the physiologic ideas of Aristotle as against Galen, rather than to carry the doctrine of either to a further development,"[16] Foster and the Italian authors,[17] on the other, concede to Cæsalpinus the recognition not alone of the true action of the heart-valves and the pulmonary circulation, but also of the fact that "the flow of blood to the tissues took place by the arteries and by the arteries alone, and that the return of the blood from the tissues took place by the veins and not by the arteries." And, whereas, Boruttau[18] states that Cæsalpinus did not clearly understand the greater circulation—the transit of the blood from the arteries to the right heart through the veins—Luciani quotes the following experiment as showing that Cæsalpinus had thoroughly mastered the conception of the circulation of the blood: "He [Cæsalpinus] observed that if in a living animal a vein be exposed, tied and shortly thereafter cut into on the capillary side of the ligature, the first blood to exude is of a dark color, while that coming later is lighter. This observation led him to assume the existence of anastomoses between the arteries and the veins."[19]

In view of the difference of opinion in regard to the value of the contributions of Cæsalpinus, we may be justified in concluding that, whatever his views may have been, they could not have been clearly and consistently stated. Possibly it was for this very reason that the doctrines of Cæsalpinus made no impression on his contemporaries. It would appear that little heed "was paid to them until they were disinterred, so to speak, by antiquarian research."[16]

How different the reception accorded Harvey's tract, "On the Motion of the Heart and Blood in Animals!" Whereas no notice had been taken of the views of Cæsalpinus in fifty-seven years, i. e., up to and after the time Harvey had committed himself in print, before sixteen years had elapsed Harvey's views had been subjected to published criticism, both favorable and unfavorable. The unfavorable criticism, it should be added, came, not from experimenters, but mainly, if not exclusively, from clinicians who, through fear that the new doctrine would wreck completely the fabric of medicine as then practiced, unwisely considered it better to bolster up the tottering structure with the old views than to rebuild it on the firmer foundation of animal experimentation. Those who then and since have put Harvey's views to the test of experiment have succeeded in substantiating him in all but a few minor details. The reason for the stability of Harvey's views may be gleaned from the well-known introductory words to the tract which laid the foundation of modern experimental medicine:

> When I first gave my mind to vivisections, as a means of discovering the motions and uses of the heart, and sought to discover these from actual inspection, and not from the writings of others, I found the task so truly arduous, so full of difficulties, that I was almost tempted to think with Fracastorius, that the motion of the heart was only to be comprehended by God. . . . At length, and by using greater and daily diligence and investigation, making frequent inspection of many and various animals, and collating numerous observations, I thought that I had attained to the truth, that I should extricate myself and escape from this labyrinth, and that I had discovered what I so much desired, both the motion and the use of the heart and arteries. From that time I have not hesitated to expose my views on these subjects.[20]

With the appearance of Harvey's work, the blood-vessel system, with at best imperfectly understood functions, becomes known to the world as the circulatory system, a term that stands at one and the same time for a system of organs and the mechanism thereof.

Harvey's demonstration of the circulation of the blood was incomplete; he had to assume the existence of "porosities of the flesh" in order to account for the passage of the blood from the arteries to the veins. Four years after Harvey's death, however (1661), the missing link was supplied by Malpighi, at one and the same time physician, anatomist, physiologist, histologist and the founder of scientific pathology. With the aid of the microscope, Malpighi succeeded in following in the lung of the living frog the course of the blood from the arteries through the capillaries into the veins, "so that," to use Malpighi's words, "the circulation of the blood is evidently exhibited."[21]

Thus, in barest outline, was the fundamental action of the blood-vascular system determined. The necessary facts, it has been seen, were gathered from all sources; the most important and decisive ones, however, were all the outcome of experiments on animals. Inferences from structure were made by all investigators; but, unsupported by experiment, they failed, even in the hands of Harvey, to lead to the truth. Nor could the case have been otherwise; a new mechanism, to be understood, must be seen and studied while in action.

The discovery and demonstration of the circulation of the blood ends the first phase of the physiology of the blood-vascular system and begins the second. With this second phase the physiologists of to-day are still concerned; it has to do with the elaboration of the details of the circulation. The limits of this paper make it impossible even to enumerate the lines along which the investigations have been carried, were the list to include only those of direct practical significance, and those in which animal experimentation has played a part. For the purpose of recalling to the mind of the reader some of the more important results of this activity, mention may, however, be made of the discovery of the automatic action of the heart, its regulation through the inhibitory and acceleratory nerves, of the vasomotor

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12. Luciani: Lehrbuch der Physiologie, German Edition, 1905. i.
13. Dalton: History of the Circulation, p. 129.
14. Neuburger and Pagel: Handbuch der Geschichte der Medizin, p. 27.
15. Dalton: History of the Circulation, p. 147.
16. Foster: History of Physiologie, p. 35.
17. Luciani: Lehrbuch der Physiologie, 1905, i.
18. Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 332.
19. Luciani: Lehrbuch der Physiologie, 1905, i, 122.
20. Harvey: De Motu Cordis, 1628; transl. by Willis.
21. Dalton: History of the Circulation, p. 224.

mechanism; of the measurement of the blood-pressure and blood-velocity, of the origin and transmission of the pulse as a wave, of the cause of the heart sounds, of the survival of organs with artificially maintained circulation, etc. Reference will be made in Parts II and III of this paper to the practical bearings of these and of many other contributions.[22]

(To be continued)

148 West Gorham Street.

A METHOD FOR THE MATHEMATICAL READING OF THE ORIGINAL WASSERMANN REACTION

PRELIMINARY REPORT

WALTER J. HEIMANN, M.D.
Chief of Clinic in Dermatology, Mt. Sinai Hospital Dispensary
NEW YORK

To the physician, for whom it has become a practical diagnostic necessity, the reports of the Wassermann reaction have presented great vagueness and inaccuracy.

TABLE OF RESULTS IN TWENTY-TWO WASSERMANN TESTS, EXPRESSED IN PERCENTAGES AND BY OLD METHOD

Source of Cases.	No.	Description After 16 Hours.		Per cent. After Centrifuging.	Old Method.
		Sediment.	Fluid.		
March 14. Maternity service. Dr. St.	1	Heavy sediment	Clear fluid	100	Very strong. + +
	2	Fairly heavy	Pink fluid	75	Very strong. + +
	3	No sediment	Wine-red fluid	0	Negative. —
	4	Slight dark-red	Dark red fluid	25	Moderate. ±
	5	Very little sediment	Dark red fluid	About 10	Weak. ?
General service and private practice of a New York physician. Dr. S.	6		Wine-red fluid	0	Negative. —
	7	Dark sediment	Pink fluid	80	Very strong. + +
	8	Dark sediment	Pink fluid	80	Very strong. + +
	9		Wine-red color	0	Negative. —
	10	Dark red	White fluid	100	Very strong. + +
	11	Dark red	White fluid	.100	Very strong. + +
Private cases	12	Very little dark red	Dark red fluid	Too little to measure	Weak. ?
	13	Dark sediment	Deep pink fluid	50	Fairly strong. +
	14	Little red	Dark red fluid	Too little to measure	Very weak. ?
	15	Very little	Dark red fluid	Too little to measure	Very weak. ?
Private practice. Dr. P	16	Dark-red red	Pink fluid	50	Strong. +
Private practice. Dr. W	17	Dark-red red	Pink fluid	50	Strong. +
Private practice. Dr. A	18	Dark-red red	Deep pink fluid	25	Strong. +
	19		Wine-red fluid	0	Negative. —
	20		Wine-red fluid	0	Negative. —
March 18. Private practice. Dr. So	21		Wine-red fluid	0	Negative. —
Private practice. Dr. W	22	Dark red (little)	Red fluid	20	Very weak. ?

It has been the custom to call the reaction "negative" or "positive," and if positive, "very weak," "weak," "medium," "strong," or "very strong." Such terminology, by its own nature, makes for inexactitude, which is anything but desirable, to say nothing of being unscientific. The human mind cannot grapple with adjectives. It needs figures. Completely to grasp variations of a color-scheme or quantitative gradations, we must obtain our impressions numerically. The terms are from zero to one hundred. No one would think of writing a hemoglobin estimate as pale pink, pink, red, dark-red, crimson, etc. We have determined what intensity of color in hemoglobin represents 100 per cent., and we have readjusted our conception of weaker concentrations accordingly. A similar, if not homologous, method would be of great use in writing the Wassermann reaction, and it is such a method which I am about to present.

The Wassermann test is based on a few simple facts. Antigen produced from syphilitic liver, guinea-pig's heart or beef-heart, according to their respective availability, in solution of a given determined strength; a 20 per cent. solution of inactivated serum of the patient to be tested; and a 10 per cent. solution of complement from the uninactivated serum of a guinea-pig, each solution being in the bulk of 1 c.c., are poured together in a test-tube and remain in a thermostat or water-bath for one hour at body temperature. If the suspected serum contains suitable amboceptor the antigen and complement will be linked, and the reaction will be one which we consider positive. We must in some way determine whether such a process has occurred. This we do by introducing 1 c.c. of washed sheep's erythrocytes in a 5 per cent. suspension, and 1 c.c. of a solution of rabbit serum of known hemolytic titer, the rabbit having been immunized to the aforesaid red corpuscles. After the addition of these two ingredients the liquid in the test-tube is pink in color and opaque. The tube is once more subjected to body temperature for one hour and the result is noted. If the complement be not bound to the antigen by the human amboceptor, it will be free to link itself with the hemolytic system and hemolysis will take place.

The crux of the entire reaction is to determine what becomes of the complement. If it join the system composed of antigen and human amboceptor, the reaction is positive; if it join the system consisting of sheep's red blood cells and sheep's amboceptor, the resulting blood laking denotes a negative reaction. Between the two extremes of total binding of the complement and total hemolysis, the gradations are infinite. The proportion of bound and free complement varies, so that visual signs of binding or laking are expressed in terms of opacity, translucency, or transparency of the fluid at the end of the test. These variations have been recorded graphically by the minus sign for a negative reaction, the plus sign for a positive, and two plus signs for a strongly positive. Almost everyone has his own system. Obviously such a method would not only vary between two individuals, so that the man who makes the test might have a different idea of the value of his hieroglyphics from that which would be connoted to anyone else, but it would vary from day to day as to the investigator himself. Thus we have had, and have, no unit of measure to standardize results. This want can be met by a method which is simplicity itself.

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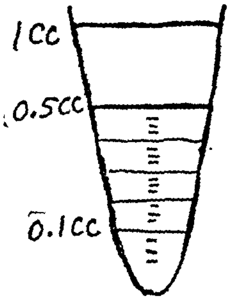
[22] It will be quite impossible to give full credit to all investigators in the fields referred to. Nor am I sanguine enough to believe that I have succeeded in my attempt to mention the first workers who have called the attention of the scientific and medical world to the subjects to be discussed.

Into each test-tube we have introduced, as has already been stated, 1 c.c. of a 5 per cent. suspension of sheep's erythrocytes. In volume this is 1/20 c.c. In the course of the test either the entire volume is hemolyzed, or none; or only a variable portion. All we need do to determine this portion is to see what fraction of 1/20 a cubic centimeter remains at the termination of the test. After from sixteen to twenty-four hours all surviving red blood cells have descended in the tubes, and according to their number the deposit is heavy or light. They lie unevenly, however, in the concave bottom of the test-tube, and thus the eye can distinguish only the greatest quantitative differences in the red cells. In a pointed centrifuge tube these difficulties are somewhat less, and the gradations in the deposit easier to determine, but in different tubes of varying calibration inaccuracies are inevitable. Therefore, working on this principle, I employed graduated centrifuge tubes and centrifuged the contents of my test-tubes sixteen hours after removal from the thermostat. In this way I was able to read off the number of surviving red blood cells. I count total hemolysis as zero, and 1/20 c.c. of erythrocytes in bulk, or the maximum amount, as one hundred. By comparing the volume of surviving erythrocytes according to this scale, and recording the result in per cent., one immediately has a quantitative idea of the reaction. Thus, if 1/40 c.c. of red blood cells are left, the reaction is 50 per cent.; if 1/30 c.c., 66⅔ per cent. If n equals the reading in the tube, and x the desired percentage, the equation is:



Graduated centrifuge tube.

$$1/20 : 1/n = 100 : x$$
$$x/20 = 100/n$$
$$nx = 2000$$
$$x = 2000/n$$

The bottom of the average graduated centrifuge tube is divided off as in the diagram, each fine space representing 1/40 c.c.

In this tube the graduation is too coarse. I shall have tubes made with thicker walls, finer calibration and larger spaces, and shall subsequently render a new report with my more accurate apparatus. This one is to be regarded as a preliminary communication, but it will be serviceable to indicate the value of the method.

Among about 400 Wassermann reactions I have made both here and abroad, I have as has already been stated, always been struck with the difficulty of imparting a conception to a second person of the strength of the reaction. The accompanying table will show at once the advantage of the new method over the old. But let me for a moment describe what is seen in a test-tube in which the reaction has been made after sixteen to twenty-four hours have elapsed. With a negative reaction we have merely a clear wine-red fluid; in a strongly positive test the red cells lie heaped at the bottom and above them the fluid is pure white. If the test be positive, but weaker, the cells are below and the supernatant fluid, containing dissolved hemoglobin, is pink, salmon-colored, deeper red, etc., according to the amount of hemoglobin in solution. The stronger the reaction the greater are the number of corpuscles at the bottom and the paler the color of the fluid. The weaker the reaction, the deeper the intensity of the fluid and the smaller the number of corpuscles. These differences expressed mathematically become definite and objective instead of subjective and vague, as they have been heretofore.

To procure the results in the accompanying table I did the reaction as outlined, and after sixteen hours shook up the contents of each tube, centrifuged for two or three minutes by electricity, and noted what part of 1/20 c.c. of corpuscles remained, calculating the percentage by the formula already mentioned. The character of the supernatant fluid after centrifuging corresponded exactly with that in the tube, as described in the table, before centrifuging. I shall apply this method to the Noguchi modification and publish my results of this together with further observations on the original test. The histories of the cases cited here have no bearing on the theme. Thus they were omitted in order to hasten my paper toward its object and its conclusion. In the table I represent side by side the old method and the new, for a contrast of the obvious inaccuracies of the former with the definiteness of the latter will speak more forcibly than countless paragraphs.

136 West Eighty-eighth Street.

AN AUSCULTATORY PHENOMENON MET IN INFANTS AND CHILDREN

H. LOWENBURG, A.M., M.D.
Instructor in Diseases of Children, Jefferson Medical College; Pediatrist to the Lebanon Hospital, and to the Jewish Maternity Hospital; Pediatrist to the Jewish Seaside Home, Ventnor, N. J.
PHILADELPHIA

The sign to which I wish to direct attention, so far as I am aware, has not been described previously. My search of the literature has been confined to the standard works on diseases of children. Briefly it may be stated as follows; normally the inspiratory murmur over the left side, especially posteriorly, in infants and children is decidedly louder and harsher than over the right side; or, reversely, the inspiratory murmur over the right side is weaker and less harsh than over the left side. Why this is so I can not explain positively, but I suspect that it may be due, in part at least, to the fact that in the left lung there being but two lobes, the same amount of air as enters the right lung is not distributed over as great an area as it is in the latter. Whatever its physics or its etiology may be I no longer have any doubt that this sign does exist as a normal phenomenon of the child's chest and that it has an important bearing on the diagnostics of pulmonary conditions. It has been regularly sought and found by myself and my assistants in all normal children, at my clinic at the Lebanon Hospital, Philadelphia, for the past year. Dr. Charles Mazer, whose attention I first directed toward it more than a year ago, informs me that since then he has examined every child that has passed under his care for it, and that he has never failed to find it in all normal children. That a recognition of this sign or the relative difference between the loudness and harshness of the inspiratory murmur of the two sides of the child's chest is of great aid in permitting a correct interpretation of pathologic conditions affecting the lungs and pleura can be best illustrated by the brief citation of a few cases.

Case 1.—Female infant, aged 16 months. Normal birth, breast-fed, dentition normal; has ten teeth now; wasted and marantic in appearance; came to my clinic at the Lebanon Hospital with the diagnosis of marasmus; had been treated for this in another hospital for three weeks without benefit; no vomiting and bowels normal. The child's age, the presence of ten teeth and the absence of digestive symptoms precluded any gastro-intestinal condition as a cause of wasting and made the diagnosis of true marasmus very improbable. The temperature by rectum was 99 F. Percussion gave but the slightest possible impairment of resonance on the left side posteriorly, extending with even less emphasis into the axilla. Auscultation showed that the breath sounds on the left side equaled in intensity and harshness those on the right. Because we had become accustomed to regard the sounds on the left as normally louder and harsher this equalization was looked on as a distinct and marked impairment of the sounds on the left side, but in a comparative sense only, and a diagnosis of fluid on this side was made. Exploratory puncture revealed pus, and after thoracotomy and drainage the child made a perfect recovery in about three months.

Case 2.—Female infant, 6 months old, seen in consultation. Diagnosis of bronchopneumonia of right side posteriorly had been made by the attending physician. He emphasized the impaired resonance under the angle of right scapula and pointed to some increase in the loudness and harshness of the breath sounds over this area. The child's temperature had been normal for ten days and leucocytosis was absent, but the child still coughed and had failed to gain, in fact, was considerably wasted. A careful examination of left side revealed slight impairment of resonance with breath sounds distinctly present but weaker than over the right side. There were no râles over the right side. The impaired resonance under the right scapula was regarded as due to the liver and the harsher than normal breath sound to an over-working lung, and the diagnosis of fluid on the left side was suggested. Puncture revealed a dirty-appearing, foul-smelling pus.

Case 3.—Male infant, 13 months old. Temperature 103 F., pulse 140, respiration 64; face flushed; alæ nasi moving. Physical examination showed the left side resonant and a few râles; breath sounds harsh and loud posteriorly on the left. On the right side was detected an area of impaired resonance extending from the lower half of the right border of the scapula latterally toward the right as far as the midaxillary line. The inspiratory breath sound was harsh and loud posteriorly equalling that of the left side; expiratory sound was slightly prolonged and blowing. Fine moist râles were also heard. The diagnosis was acute lobar pneumonia of right middle lobe. Crisis on the fifth day. On the seventh day the temperature rose to 103 F. Physical examination showed flatness on the right side posteriorly and distant râles with breath sounds weaker than on the left, but sufficiently audible to resemble in intensity and quality the normal sounds on the right side. In view of the previous history of pneumonia, the flatness and the displacement of the liver and the heart, the diagnosis of effusion was made and confirmed by puncture.

Case 4.—Male infant, 8 months old. Diagnosis of pneumonia on the left side was made by the attending physician. There was a cough, temperature of 102 F., pulse 110, and respiration 20; a few large moist râles were heard on both sides; chest was resonant throughout. The inspiratory sound was distinctly harsher and louder over left side posteriorly. I suggested that this was normal and made a diagnosis of simple bronchitis. Recovery occurred within three days.

Case 5.—A female infant, 17 months old, the daughter of a physician, had a temperature varying between 102 and 104 F. for the previous five days. The father feared typhoid fever, but one of his colleagues had made a diagnosis of pneumonia on the left side, noting the loudness and marked harshness of the sounds on this side when compared with the right. The suggestion was made that this was a normal phenomenon. Further physical examination of the chest was negative. The child apparently was in no pain. The right drum-head was found to be red and bulging. Diagnosis, acute otitis media. I suggested an aurist. Puncture of the ear-drum was followed by a free discharge of pus, and recovery.

Cases 1 and 2 illustrate the value of recognizing the fact that there is something wrong (usually presence of fluid) when the inspiratory sound on the left side loses in strength and equals or is less in intensity and harshness than on the right.

Case 3 shows that, with other features (impaired resonance, râles and prolonged expiration) present, when the inspiratory sound on the right side is harsh and loud, approaching that which is regarded as normal for the left, trouble, usually consolidation, exists in the right lung. The second part of the case illustrates that weak breath sounds on the right may lead to confusion and prevent a correct conclusion, as they are normally weaker on this side. In such instances we can only compare the character of the sounds with that which experience has taught us to regard as normal for this side. Therefore ausculation, unless the breath sounds are entirely absent, is of little value in diagnosing fluid on the right side. Dependence must be had largely on the history of the case, percussion and the displacement of internal organs.

Cases 4 and 5 illustrate that, unless one is familiar with this sign as a normal phenomenon, one is liable to regard it as indicative of a pathologic condition, especially pneumonia, on the left side. Case 5 further illustrates the importance of making a complete physical examination in every case of obscure fever, not neglecting the ear, even in the absence of pain.

CONCLUSIONS

1. Normally in infants and children there exists a marked relative difference in the intensity and harshness of the inspiratory sound of the two sides of the chest, that on the left being louder and harsher. This difference is best noted posteriorly.
2. The absence of this sign on the left usually means fluid in the left pleural sac.
3. The diagnosis of fluid on the right is made more difficult by reason of this sign.
4. The diagnosis of consolidation on the left is made more difficult.
5. Unless this sign is taken into consideration the diagnosis of pneumonia on the left is apt to be made when other conditions are responsible for the fever.
6. Consolidation should be suspected on the right when the sound on this side equals in harshness and intensity that which is normal for the left.
7. Equalization of the sounds on the two sides, that on the left being weaker than normal, usually indicates fluid on the left.

1502 Diamond Street.

Prophylaxis of Typhoid Fever.—The discussion on this subject which was carried through eleven meetings of the French Academy of Medicine was concluded by adoption of a series of resolutions advocating specific sanitary and hygienic measures. A resolution was voted down which stated that the danger of contagion from healthy typhoid bacillus carriers is negligible in comparison with the danger from contaminated water. The possible peril from bacillus carriers, sick or well, and the necessity for seeking them out were emphasized in the resolutions adopted.

MYIASIS

A REPORT OF THREE CASES OF PRIMARY RECTAL INFECTION[*]

J. L. NICHOLSON, M.D.
RICHLANDS, N. C.

It has long been known that man is one of those organisms in which myriads of parasites and pseudoparasites find conditions congenial to their growth, development and continued existence. Among these are the diptera, which form the subject of this paper.

The diptera include all the different varieties of *Brachycera* or flies from which the larvæ of myiasis originate.

The following facts may be noted in regard to flies as set forth in an interesting paper by McCampbell and Corper:[1]

> Some lay no eggs, living larvæ issuing from the female (viviparous). It has also been noted that when certain of the dipteræ become parasitic, no wings are developed. Nothing seems to be known as to whether the larvæ may reproduce, as has been noted in the embryonic types of some other forms of animal life. The sexual organs in the larvæ, according to most entomologists, are not completely developed until after the adult fly stage is reached. The larva is entirely different from the adult fly; and, during the pupal stage which intervenes all the organs of the larva, except the reproductive, undergo degeneration, and are regenerated. Such an arrangement suggests a very high specialization of these organs; and it may be possible that when these larvæ become parasitic within the body, reproduction may take place. It seems positive that the eggs can hatch and the larvæ grow to full size in the intestines of man. It has also been observed that larvæ may exist for long periods of time within the body.

Myiasis is the term applied to the accidental infection of the body cavities and of the skin by the larvæ of these dipterous insects.

This infection by fly larvæ was designated by Hope as myiasis; and the condition has since been divided by other writers into myiasis externa, or dermatosa, and myiasis interna or intestinalis.

The following are some of the leading or principal families of flies the larvæ of which produce this condition: (a) The "blue-bottle," flesh fly; (b) *Lucilia macellaria,* the screw-worm fly and (c) the *Dermatobia hominis,* a tropical American fly. These are chiefly responsible for the external varieties of the disease.

Among the flies producing myiasis intestinalis we find the common house fly (*Musca domestica*), the *Sarcophagia* or flesh fly and the *Anthomyia canicularis.*

The common house fly seems to be the source of infection in the three cases coming under my observation. The number of generations of this fly varies greatly with climatic conditions, supply of food and other factors. The number in North Carolina, according to Metcalf, would undoubtedly be from 10 to 14 broods a year. This fly, like many other insects, passes through 4 distinct stages in the process of development—the egg, the larva, the pupa, and the adult, the full process requiring from 10 to 14 days. The adult fly lays the eggs in suitable places, usually in stable manure, occasionally on human excreta and decomposing vegetable matter. The duration of the egg stage in favorable weather is but a few hours. The larvæ are white-pointed maggots from 1 to 2 c.m. in length, and composed of 9 or 10 well-defined segments. The larval or maggot stage covers a period of about five days in summer, varying greatly, however, with the weather conditions in general. The pupal stage may not extend beyond 5 days, while under other conditions, as in winter, it may persist for months.

It is universally held that the invasion of such body cavities as the ears and nose, and of the wounds on the surface, is the result of the accidental deposit of eggs at the point infected; and that those which are found in the intestines are ingested with the food on which the adult fly has deposited its eggs. It is evident that little if anything has been said of infection by rectum. Finlayson's suggestion of the possibility of such an avenue of infection stands out alone against the generally accepted teaching of infection by the mouth following the accidental swallowing of the eggs and newly hatched larvæ with food.

The history of the three cases which have come under my observation in the last three years, and which I now propose briefly to relate, points almost unmistakably to rectal infection.

Case 1.—*History.*—A native of Onslow county, North Carolina, married and mother of four children, ever since her first pregnancy, twenty years ago, has been suffering with "piles;" even prior to that time she suffered from painful menstruation and chronic constipation. For the last eight years her life has been still further burdened with rectal prolapse, proctitis and mucomembranous colitis. During this time her life has been that of a well-nigh bedridden invalid. She was absolutely confined to her room; a common stool chair with an opening in the bottom and "chamber" underneath, exposed to the flies, served her as a commode. In the summer of 1906 she discovered large numbers of small, white worms or maggots, as she calls them, in her stools, to which she called my attention. On examination, these organisms proved to be larvæ of the common house fly. During this summer as well as in 1907 and 1908, she had several recurrent attacks of the infection, each being manifested by expulsion of from fifty to several hundred dipterous larvæ. Preceding and accompanying each attack, digestive disorders, vomiting, colicky pains, abdominal distention and increased mucous bowel discharges—symptoms common to her—were greatly aggravated. At times these parasites were expelled massed or clumped in small balls, approximately the size of an ordinary marble; at other times they were equally mixed with liquid mucoid stools. After each expulsion there came a distinct amelioration of all the bowel symptoms. This patient, of course, was anemic, pale, almost cadaveric, suffering greatly with indigestion and all manner of abdominal and rectal distress.

Management and Course.—Having failed to prevent the recurrence of these attacks of myiasis by any manner of medication or rectal irrigation, and also failing to get her consent for proper operation, about the middle of the summer of 1908, I advised absolute protection of the anus from all approach of flies during the act of defecation. The result was a complete cure of the infection, without any subsequent recurrence to date, together with a marked improvement of the rectal and colonic troubles. Such satisfactory results, coupled as well with the statements of the patient that she had experienced no less than twenty such attacks during the summers of 1906-7 and 8, furnish the strongest and most convincing proof that this patient, at least, became infected by the deposition of the eggs of the house fly on the prolapsed rectal membrane during the time spent at stool on an open chair.

Case 2.—*History.*—A white man, aged 24, a merchant by occupation, first came to me for treatment in July, 1908. He was thin, decidedly feeble and anemic. Eight years prior to my interview with him he began suffering with slight rectal prolapse, which now was quite an inch with each bowel passage. For the past six years he had discovered at various times hosts of small white worms in his feces. He brought samples of these parasites for my inspection. These, which varied sharply in length and size, were the larvæ of the common house fly. He claims to have had dozens of these attacks during these five years; and stated that as many as 500 of these little worms were sometimes expelled at a single defecation, while at other times only a few or so accompanied each stool. In addition to symptoms previously mentioned, each of his attacks was preceded for 48 hours by sinking, depressed feelings, accompanied by burning, internal, colicky pains near the region of the umbilicus. These symptoms, to him significant of the approaching expulsion of maggots, loss of appetite, nausea, colic, and diarrheic actions, ushered in the attack. The first loose stool contained the majority of the larvæ, all being expelled in 3 or 4 stools. After this the diarrhea, burning colic, nausea and depression subsided. His life habit had been to be slow at stool and always to defecate in the horse stable, if possible.

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[*] Read before Seaboard Medical Association (Virginia and North Carolina) at Norfolk, Va., Dec. 9, 1909.

[1] McCampbell, E. F., and Corper, H. J.: Myiasis Intestinalis Due to Infection with Three Species of Depterous Larvæ. The Journal A. M. A., Oct. 9, 1909, p. 1160.

Management and Course.—My injunction to him to quit the use of the horse stable as a privy and to use a closed vessel, caused a cessation of his infections from July, 1908, until August, 1909, when he reported the return of the maggot and pleaded guilty to a return to his horse stable practice. Another point of interest is that all the attacks of this patient came in the summer months, the earliest recalled occurring in April.

Case 3.—*History.*—The patient, a white woman, aged 50, married 30 years, and the mother of 9 children, in July, 1908, came to my office for treatment; she was pale, almost yellow in complexion, very nervous, and suffering with acute indigestion and diarrhea. The attacks, alternating with constipation, had troubled her at irregular intervals for 2 years or more. She came much distressed because she discovered that morning while at stool that hundreds of little white maggots had come from her bowel. This patient was a constant user of an open privy, and was a sufferer from internal piles, which at times came down during defecation.

Management.—The same advice to keep off the flies was given to this patient, but as I have lost sight of her, I cannot speak with positiveness of her recovery.

SUMMARY

Having thus cited the peculiarities of each of these cases, let me briefly submit the following summary as a closing feature, believing that the similarity of symptoms and surrounding conditions common to all three cases are of significant interest:

1. All the individuals affected were white adults, intelligent, fairly cleanly of habit and truthful of statement.
2. All suffered constantly or periodically with protrusion of folds of the rectum during defecation.
3. All were equally exposed to fly contamination during the process of defecation.
4. All suffered with more or less tenesmus, and were slow at stool, thereby offering ample opportunity for the deposition of eggs on the protruded membrane, smeared with feces, mucus and more or less blood.
5. All symptoms characteristic of these attacks ceased or were much improved with the expulsion of the maggots.
6. No recurrence of the infection took place in either of the first two patients so long as they followed my advice to protect the anus thoroughly from the approach of flies during the act of defecation. The third patient having been lost sight of, I am not able to speak with certainty regarding recurrence.

Finally, the facts set forth in these cases seem to me to demonstrate, beyond a reasonable doubt, that the avenue of infection was by rectum. This opens up an interesting field for further observation, and suggests that a large number of cases of myiasis intestinalis occur in persons affected with anal and rectal disease, and that in them it is due to the fact that the proper precaution to prevent rectal invasion has not been observed. The remedy, from this point of view, is evident.

Electrotherapy.—Electrotherapy must not be regarded as a cure-all, nor as a placebo, but if used in connection with other therapeutic measures it will be found to be a very useful servant.—H. M. Imboden, in *Albany Medical Annals.*

EXTRAUTERINE PREGNANCY

DISCHARGE OF FETUS BY RECTUM; PELVIC ABSCESS; INTESTINOVAGINAL FISTULA; GENERAL ADHESIVE PERITONITIS; PHLEBITIS OF BOTH LEGS; RECOVERY

J. R. LAUGHLIN, M.D.
HAGERSTOWN, MD.

Patient.—Mrs. J. B., aged 24; married six years; no children.

Present Illness.—She had missed two periods and was suddenly seized with severe pain and cramps in right side, followed by a bloody discharge which had continued three weeks, when I first saw her, June 8, 1908.

Examination.—The uterus was slightly enlarged and firmly fixed; there was a slight bloody discharge from the cervix. The pelvic organs were very tender and there was a board-like hardness over the hypogastrium. Temperature was 100 F., pulse 88.

Course of Disease.—The patient was treated for pelvic peritonitis for four weeks with improvement of symptoms, but no change in rigidity. July 5, her bowels became very loose with bloody stools, and on July 6 a partially decomposed fetus about two inches in length was passed at stool. A few days later the temperature rose to 104 F. and an incision made in the vaginal vault evacuated a profuse purulent discharge with fecal odor. Drainage was kept up for two weeks, but on investigation a recto-vaginal fistula was found by which feces were discharged through the vagina. Four weeks after the operation the fistula had closed, the vaginal discharge had ceased, and the woman seemed well when she suddenly developed a left femoral phlebitis; this promptly yielded to rest and elevation and she was discharged cured August 20.

Subsequent History.—Four months later she had what appeared to be a typical attack of acute appendicitis. An incision was made in the median line of the abdomen but the adhesions were so dense that the appendix could not be reached, as many as three loops of intestine were found firmly adherent together and it was impossible to find a piece of free intestine more than six inches in length. A few cysts filled with fluid were found; these were opened and an uneventful recovery followed. Four months later she had a similar attack, except that the pain was not especially localized.

She was put to bed and given local treatment, and improved for two weeks, when the old fistula reopened, but closed again in a few days. She again developed a phlebitis, this time in the right leg. By July 23, 1909, all symptoms had disappeared and she has continued well since.

146 West Franklin Street.

ACUTE PERFORATION OF A DUODENAL ULCER

J. T. ULLOM, M.D.
PHILADELPHIA

Patient.—S. M., aged 63, a married man. Aside from the case of a sister who died at 73 of "stomach trouble," the family history offered nothing of interest. The patient had had no serious illness beyond the ordinary diseases of childhood, and malaria at 38, but had suffered more or less for the last 20 years from stomach trouble, diagnosed by Dr. Osler near the beginning as "nervous dyspepsia."

Present Illness.—The patient was well during the winter of 1907-08, but in March, 1908, he had what he called an ordinary bilious attack, with clay-colored stools and vomiting of greenish material, after which he continually had more or less trouble which he referred to his stomach. This usually manifested itself two or three hours after dinner with distress, distention and belching; the attack, if not relieved by vomiting, would be followed by discomfort all night, accompanied by acid eructations. The vomitus was sometimes green, sometimes brown and often of amazing quantity. There was never any suggestion of blood in the vomitus nor was it ever coffee-ground in character. Gastric analyses made on numerous occasions showed a total acidity of about 40 and a free hydrochloric of about 20.

Urine analyses showed no abnormality except a specific gravity of 1010. Physical examinations made during this period showed nothing abnormal. The lungs and heart were normal, the abdomen contained no mass and there was no area of tenderness. The skin was sallow and the face expressive of illness. Despite his wretched condition and considerable loss of flesh the patient went to his office every day during the spring and early summer of 1908. About 11 o'clock one morning he had an attack of pain, referred to the right side of the abdomen, so severe as completely to prostrate him.

Examination.—The temperature was subnormal, the pulse 120, and very weak and the patient was bathed in a cold perspiration. The abdomen was extremely rigid, and exquisitely tender and the patient resisted any attempts to examine it.

Operation.—It was realized that some serious intra-abdominal accident had occurred; the patient was hurried to the Germantown Hospital, and a laparotomy was performed. A large incision was made, and a perforation was found in the duodenum just outside of the pylorus. This was closed and the abdominal wound sutured. The patient was returned to his room as quickly as possible, as his condition became very bad while on the table.

Post-operative History.—The patient reacted nicely and that evening at 6 was conscious, although uncomfortable. Temperature 98.6, pulse 96, respiration 20. At times during the afternoon his respirations were Cheyne-Stokes, but they were much better toward night. His condition remained pretty good for the next two days except for a complete suppression of urine. At the end of that time he passed a large quantity of urine and continued to void large quantities daily. This showed a trace of albumin and some hyaline and granular casts. Temperature and respirations remained satisfactory and the abdomen showed no signs of peritonitis. After seventy-two hours, on September 13, the patient became very restless, slightly delirious and hard to control, got out of bed, and tore out the stitches in the abdominal wound, allowing the wound to gap. He remained delirious and extremely restless. About midday, September 15, he was seized again with agonizing pain in the abdomen of apparently the same character as the initial pain, which could be relieved only by repeated injections of morphin. He died at 6:30 p. m. that day.

Post-mortem Examination.—A partial autopsy was obtained and there was found a duodenal ulcer just outside of the pylorus running longitudinally and a trifle obliquely, about 4 cm. in length, and 1.5 cm. in width. At the end of this ulcer nearest the pylorus was the perforation which had occurred on September 10 and which showed no signs of healing. At the other end of the ulcer was another perforation that had apparently taken place at 12 o'clock on the day of death, as manifested by the severe paroxysm of pain at that time. On microscopic examination there was complete erosion of the mucosa, submucosa, and the muscular layers and at the edge of the ulcer there was increased fibrous tissue and some round-celled infiltration. The kidneys were smaller than normal and the capsule stripped with some difficulty. On section the cortex was slightly contracted and microscopically the picture was that of chronic diffuse nephritis.

This case was of interest to me as offering considerable difficulty in diagnosis. Here was a man of 63, with a history of dyspepsia running back for twenty years, with periods of comfort alternating with periods of considerable gastric distress. After a year of good health, he began to lose flesh, became anemic, and experienced pain some time after meals, which was relieved by vomiting. There were acid eructations, but rarely spontaneous vomiting and no hematemesis, melena, or localized tenderness. The diagnosis now seems an easy one but before the perforation it was felt that there was very little on which to base a diagnosis. When the perforation occurred it was realized only that a rupture of some viscus had occurred, but whether appendix, stomach, intestine or gall-bladder could not be told with any degree of certainty.

When the literature on duodenal ulcer was examined, it was found that many cases are absolutely latent and perforation or a serious hemorrhage are the first indications of an ulcer. Gibbon and Stewart present seven cases of perforated duodenal ulcer and in three of these there was absolute latency, and in the other four, one showed symptoms of indigestion for twenty-four hours, one for a week, one for two weeks, and one for several months. Musser's case showed symptoms of hyperacidity for ten years. Smith found symptoms referable to duodenal ulceration in only three out of fourteen cases, although nine patients had digestive disturbances. Haggard states that ulcer of the duodenum very frequently exists without symptoms and a fatal hemorrhage or a perforation are the first signs of trouble. Morot, according to Haggard, finds that 20 per cent. of duodenal ulcers are latent. Shaw and Berry examined 157 cases post mortem and found that no history could be obtained in ninety-one. Moynihan states that many ulcers remain latent for a long period.

The classical symptoms of duodenal ulcer are three, pain, melena, and hematemesis. Pain is the most constant symptom found and usually comes on from one to three hours after meals. It is coincident with the discharge of the acid chyme into the duodenum and depends on the character of the food ingested. Sometimes it is relieved by eating. This is explained by the closure of the pylorus when food is introduced into the stomach. The pain is often relieved at its acme by vomiting and the patient immediately becomes normal again. The position of this pain is usually to the right of the median line and below the ribs in the position described as that of the gall-bladder.

It varies much in severity from a simple discomfort to a most agonizing pain and it rarely is found to radiate. Tenderness, which must be considered with pain, is not often found, owing, no doubt, to the position of the duodenum. The presence of blood in the stools, in the absence of hemorrhoids, is of course evidence of ulceration in the alimentary canal somewhere, and taken in connection with the characteristic pain, makes the diagnosis almost certain. Blood may appear in the stools as a frank hemorrhage, as old blood in tarry stools, or as occult blood. Every patient presenting symptoms referable to gastric or duodenal ulcer should be examined for occult blood. The vomiting of blood is more apt to occur in ulcer of the stomach, but is sometimes found in duodenal ulceration. In the twenty-three cases of Moynihan, hematemesis and melena occurred in four, hematemesis alone in three, and melena alone in two. No doubt in many cases blood would be found to be discharged by the bowel if more examinations for occult blood were made There are two grave accidents to be feared in duodenal ulceration, perforation and hemorrhage. Perforation gives the symptoms common to perforation of any abdominal viscus, prostation, weak rapid pulse, cold extremities, cold sweating, intense abdominal pain with board-like rigidity succeeded in a few hours by tympanites and the symptoms of peritonitis. The diagnosis can be made only on the history of the case and the location of the pain and tenderness. Hemorrhage is shown by pallor, shock and the appearance of blood at the anus. If a large blood-vessel is eroded death is apt to occur before anything can be done.

This case was a very instructive one and it seems now that a closer analysis of symptoms with an examination for occult blood would have made a diagnosis possible.

24 Carpenter Street.

IMPROVED ETHER INHALER AND BLOOD ASPIRATOR

EDWIN PYNCHON, M.D.
CHICAGO

In my paper in The Journal, June 20, 1908, were illustrated and described an anesthesia apparatus and a blood aspirator, which were designed for use in surgical operations in the mouth and throat. Having since then improved these devices I will describe briefly the changes made therein, which are shown in the illustrations here given. In place of the foot bellows formerly employed in the anesthesia apparatus (Fig. 1), I have substituted the less expensive and simpler Politzer air-bag of the six-ounce size, provided with an inlet valve in the bag, and have supplied, in addition, a similar valve in the tube leading therefrom to the ether bottle, in order to prevent any rearward motion of the air while the hand bag is being expanded. In this way the air current supplied is intermitting, and its motion is timed with the patient's inspirations.

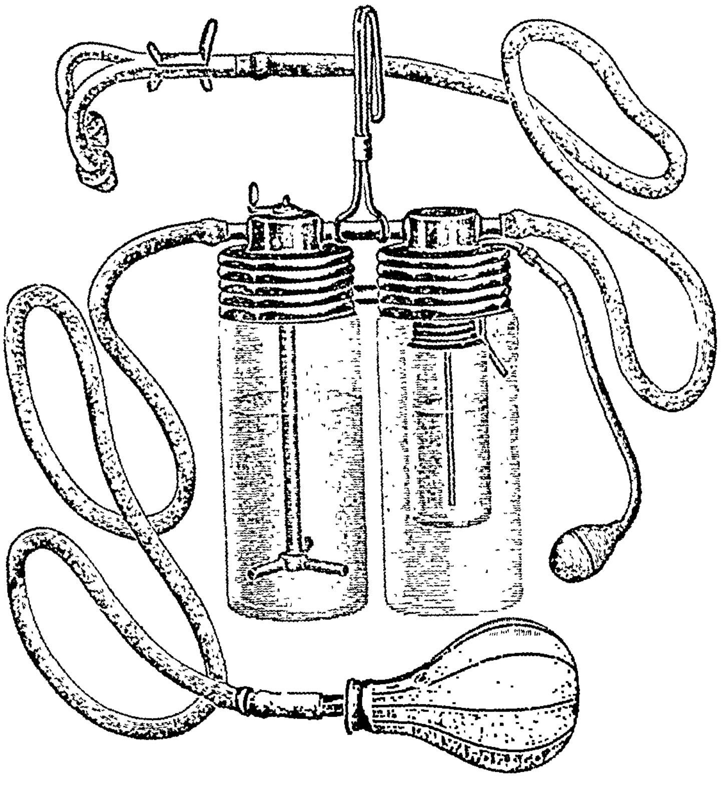

Fig. 1.—Anesthesia apparatus.

The bottles are of different shape, and of larger size, than those formerly employed. The first bottle is not more than two-thirds filled with ether. The second, or mixing bottle, as suggested by Brophy, prevents the passing to the patient of the fluid anesthetic, as might otherwise occur should the anesthetic bottle be too nearly filled, or should too much force be employed in the supply of air. The air-tube in the ether bottle is provided with a three-pointed extension, so as to divide up the entering air, and cause its better exposure to the ether. By operating the lever on the top of this bottle, which swings 180 degrees, the passing air current may be more or less forced to bubble through the ether.

In the second bottle, which was formerly employed as only a mixing or safety chamber, I have been enabled, owing to the wide mouth, to introduce a smaller bottle for the use of chloroform, which thus can be added to the etherized air current if at any time required. By slightly compressing the small connecting rubber ball the air above the chloroform is condensed, so as to force outward into the larger bottle a few drops thereof through the escape tube. At all other times the etherized air passes about this bottle without absorption of chloroform.

From the mixing bottle a rubber tube leads to the patient; it terminates in a Y-shaped tip, with conical hard rubber plugs, so as to fit tightly into the patient's anterior nares. In order to meet the requirements of different ages, from infancy to maturity, I have found that four sizes of these tips are required. The patient is first anesthetized with the mask, in the usual manner. Then a change is made to the inhaler as the operation is begun. In this way the anesthetist is at no time in the way of the operator, and an even anesthesia can be easily maintained. Furthermore, as all the etherized air is compelled to pass through the nose, it is both warmed and humidified before reaching the lungs.

In the blood aspirator the same size and style of bottle is employed as those used in the inhaler (Fig. 2). Being wide-mouthed it permits of easy emptying of the coagulated blood. The aspiration tip differs from the one formerly employed, and terminates in a cage of perforated metal, with one large conical opening at the end for blood clots. This cage can be unscrewed and removed for cleansing. With this device, after the mouth gag has been adjusted, blood and saliva can be removed, and the operative field kept fully exposed. The exhaust, when required, is created by the air pump, which is operated by a nurse. The receiving bottle is supported by a tape from the neck of the assistant who, while holding down the tongue with a depressor in his left hand, has in his right hand the aspiration tip for use when required. The patient is in the Rose position, whereby the larynx is above the plane of the pharynx. With the aid of the aspirator, accumulating fluids are removed, and are therefore not drawn in the lungs, causing respiratory arrest, or swallowed, causing vomiting. Through a combination of the improved anesthesia and the aspiration, postoperative complications are to a large extent avoided.

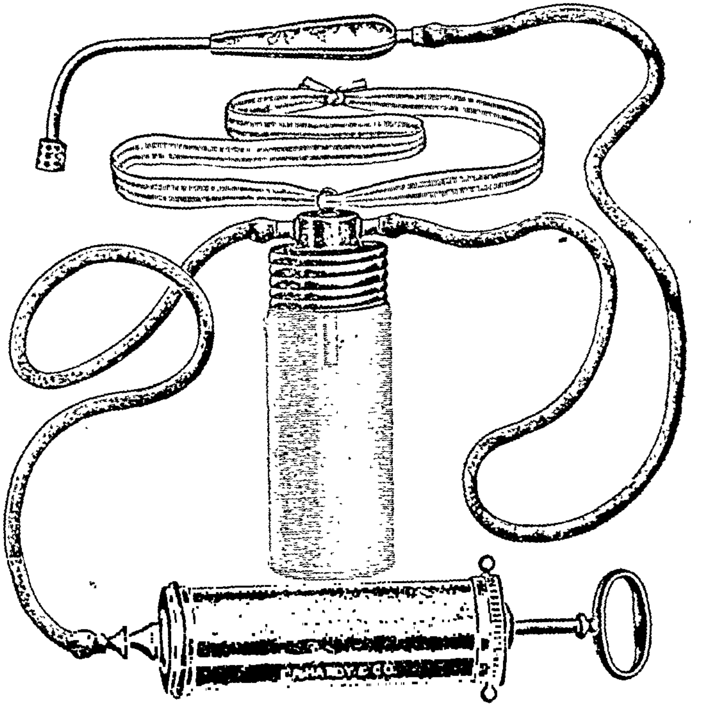

Fig. 2.—Blood aspirator.

103 State Street.

ERYTHEMA FROM BALSAM OF PERU

H. H. HAZEN, M.D.

WASHINGTON, D. C.

Of late years there have been a number of cases reported in which balsam of Peru applied locally in scabies has caused a nephritis and it frequently sets up a dermatitis at place of application. Lewin[1] mentions a case in which 8 gm. applied locally to the arms, shoulders, and chest for scabies caused an urticaria and bronchitis. With the exception of this case I have been unable to find anything in the literature that corresponds to my case.

The patient, a white man, aged 20, had contracted gonorrhea, and a severe epididymitis shortly developed. While under treatment he noticed an itching between the fingers, which soon spread up to the wrists, and then up the forearms, being especially marked on the flexor surfaces of the elbows. The eruption appeared on the abdomen, and one or two papules appeared on the penis. The lesions appeared as papules or vesicles, which itched intensely, especially at night. The patient's physician, Dr. Craig, diagnosed scabies and recommended either sulphur or balsam of Peru. At a later date, Dr. Craig informed me that the boy had himself made a mixture of balsam of Peru and lard and had used it very freely. After the use of the ointment for one week there appeared on the face and all over the body a blotchy ill-defined eruption that itched intensely when he perspired. It is to be noted that the patient had taken no drug whatsoever internally for the gonorrhea, now almost cured; I saw him two weeks after the secondary eruption had appeared. In the interval he had thought that the scabious lesions were spreading and had been applying the ointment very vigorously and had been rapidly getting worse. He had no trace of the scabies, but was almost completely covered by a macular, ill-defined, measly eruption that was of a faint pink or purplish color. The macules were about 1 cm. in diameter and were roughly oval in shape. Over the extensor surfaces of the knees the skin was thickened and of a markedly purplish hue. There was no factitious urticaria. The eruption resembled that caused by the internal use of copaiba, except that it was paler in color. To some extent it resembled a macular syphilis, but no chancre could be found, there was no glandular enlargement, no alopecia, and no sore throat or mouth. The diagnosis of erythema from balsam of Peru was made. The urine was examined for a possible nephritis. The specific gravity was 1005, the color pale yellow, not brown as is usually the case in balsam of Peru intoxications, and contained a number of gonorrheal shreds, but no albumin that could be demonstrated by either Heller's or the heat and acetic acid test. The ring test also failed to show any resinous bodies. There were no casts and no red blood cells. I ordered the use of the balsam stopped and prescribed instead a mild lotion. Within a week the patient was well, though previously he had been getting worse steadily. The results, I think, make the diagnosis certain.

1204 Eighteenth Street.

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[1] Lewin: Nebenwirkungen der Arzneimittel, 1899, p. 629.

THE CRESCENDO MURMUR IN MITRAL STENOSIS

ALFRED E. COHN, M.D.

NEW YORK

Last August, Dr. E. M. Brockbank[1] published his theory of the crescendo murmur in mitral stenosis and concluded contrary to the current teaching, that this murmur was made during auricular systole (presystolic), that it occurred during the early portion of ventricular systole, possibly in the presphygmic period. Letters were subsequently published by Sir John Broadbent, Dr. Taylor and Dr. Samways criticizing Brockbank's notion from one point of view and another.

In October I reported[2] the findings in a case of mitral stenosis in which the presystolic murmur was constant and which persisted during those cycles in which there was ventricular silence, the irregularity being due probably, to digitalis poisoning. In this case the murmurs which accompanied ventricular contraction, together with the first and second sounds, were wanting, the presystolic murmur alone marking the occurrence of the cycle.

I wish to report a second case which I have been enabled to study with the permission of Dr. N. E. Brill. This also is a case of mitral stenosis, with a presystolic murmur, in which there are no cardiac irregularities. After admission to the hospital the patient was treated from time to time with tincture of strophanthus and the tincture and infusion of digitalis. During the time of the digitalis poisoning, an irregularity was noted which on analysis proved to be similar to that of the case already reported. Here also the irregularity was due to the fact that there was recurring ventricular silences. These occurred frequently after every third beat, sometimes after intervals of five and nine beats. There was no regularity in the recurrences of these ventricular silences. At the time ventricular contraction should have taken place, there was heard to mark the occurrence of a cycle only a presystolic murmur, the two heart sounds and the accompanying systolic and diastolic murmurs being wanting at these times. It will be noted in the accompanying tracings (Fig. 1 that the a-c interval is prolonged to 0.35 second. It will also be noted that the auricular systoles after the cycles in which there was ventricular silence are premature, and that the a-c interval is considerably shortened. Some days after the administration of digitalis was stopped the irregularity noted disappeared. Dr. Brill has kindly confirmed these auscultatory phenomena. This case and the one already reported seem to me to throw considerable light on the question of the production of the presystolic murmur. It would seem that, since during the time of the ventricular silence it could be demonstrated that the auricles only contracted, it is reasonable to presume against Dr. Brockbank, that an auricular systole is responsible for the production of the crescendo murmur.

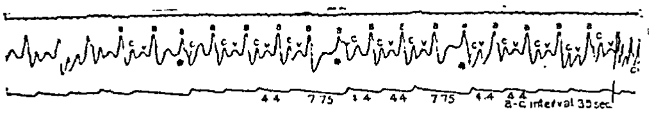

Fig. 1.—March 10, 1910. The long radial pauses are represented in the jugular tracing by a-waves only. The a-wave which follows the star (*) is premature by about 0.11 second. In this cycle also, the a-c interval is reduced from 0.35 second to 0.25 second. The upper line in both tracings represents the time in 1/5 seconds.

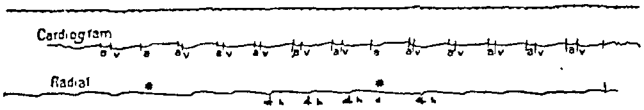

Fig. 2.—March 11, 1910. The upper curve is an inverted cardiogram; the lower is the radial tracing. The long radial pauses (*) are represented in the cardiogram by an a-wave only; a v-wave, representing ventricular contraction, is here wanting. It was in these cycles that the presystolic murmur alone, unaccompanied by first and second sounds together with their murmurs, was heard. It will also be noted that in this tracing the As-Vs interval gradually increases up to the cycle in which the a-wave occurs alone. The following cycle again shows a short As-Vs interval, 0.1 second; and gradually lengthens to 0.3 second.

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[1] Brockbank, E. M.: Brit. Med. Jour., Aug. 28, 1909.

[2] Cohn, A. E.: Brit. Med. Jour., Oct. 16, 1909.

Therapeutics

MERCURY IN SYPHILIS

In spite of the vicissitudes through which practical therapeutics has passed in modern times, mercury still retains its rank as the one indispensable drug in the treatment of syphilis. Attempts have been made, however, to make its use more exact, and its effects more prompt. The importance of this subject has been increased by the finding of the *Spirochæta pallida* as the probable cause of the disease, and by the discovery of the Wassermann reaction, which has shown that the syphilitic element in disease is far more frequently an important factor in guiding treatment than had hitherto been realized.

In undertaking the treatment of a case of syphilis, several questions arise which have not yet been definitely settled, or at least about which there is still room for difference of opinion.

In the chronologic history of the individual case the first therapeutic question which arises is, when shall the administration of mercury be commenced? It has been the fashion with most teachers to advise that mercury should not be prescribed until the appearance of the secondary cutaneous lesions. It is argued that it is extremely difficult to make an accurate diagnosis of the primary lesion, and that if one commences the use of mercury before the rash appears, and then, if the rash never does appear, that one cannot be sure that he has not made a mistake in diagnosis, that the patient never had syphilis, and that consequently he has unnecessarily undergone a tedious, expensive, not beneficial, and possibly absolutely injurious, treatment. It is indeed a most astonishing argument to use against a proposed treatment, that there is a not inconsiderable chance that the diagnosis may be incorrect. But the discovery of the *Spirochæta pallida*, and the growing conviction among the members of the profession that it is the cause of syphilis, has lessened the liability to error in diagnosis. Dr. H. M. Christian, of Philadelphia, in an excellent practical article on this subject (*Monthly Cyclopedia and Medical Bulletin*, January, 1910), says that he "would be disposed to put a patient on treatment at once if *spirochætæ* were found on any given lesion, but he also states that he would require pretty convincing evidence that they were actually present. He also quotes Harris (The Journal Dec. 5, 1908) as saying, "After demonstrating the organism in a primary lesion, it is not only unnecessary but harmful to wait for secondary manifestations. The most logical therapy is excision of the chancre, when possible, and in all cases the immediate institution of vigorous antisyphilitic treatment."

Having decided to commence the treatment with mercury, the next question which arises is, what preparation of the drug shall be used, and how shall it be administered? In many cases it is preferable to administer the medicine internally and the preparations best adapted for such use are the protiodid, the biniodid, the bichlorid of mercury, and mercury with chalk. The one best adapted for general use is the protiodid, which may be given in doses of 0.015 to 0.02 gram (¼ to ⅓ of a grain) three or four times a day, the smaller dose and less frequently repeated if the medicine causes too frequent movement of the bowels. This treatment should be employed constantly, even in benign cases, for at least eighteen months.

The inunction treatment is an exceedingly "efficient method of attacking the disease in its incipiency." On this point Christian writes: "At the outset of every case of syphilis, if it is at all practicable and can be done without attracting attention, I advise a course of 20 inunctions, employing 4 grams (a dram) of the official mercurial ointment, rubbed well into the different parts of the body, once a day, the treatment lasting from at least 10 to 15 minutes." While patients are under this inunction treatment, a "body bake" or, as Christian suggests, a Turkish bath at least once a week is advisable. At the end of 3 weeks Christian begins the internal administration of mercury, but thinks that it is advisable to give a course of inunctions at least 2 or 3 times during the first year in every case of secondary syphilis. If there is "marked anemia with loss of flesh, and profuse eruption threatening to appear on the face, with marked alopecia," Christian believes that internal medication is temporizing, and more strenuous measures should be inaugurated. He also believes that every patient who has recovered from all manifestations of syphilis should receive a three weeks' course of mercurial inunctions twice a year for 4 or 5 years.

A third method of administering mercury, which has been gaining considerably in favor during recent years, is that by intramuscular injection. Most writers on this subject advise the intramuscular injection to be made into the gluteal region. It is not absolutely demonstrated that this is the only place or perhaps even the best place for these injections. Dr. Henry A. Pulsford, of South Orange, N. J. (*The Journal of the Medical Society of New Jersey*, September, 1909) writes: "In selecting the point for each puncture one should be sure that the layer of muscle into which the needle is to be thrust is sufficiently thick and not too well supplied with vessels and nerves. In general we avoid the lower part of the buttock, in order that our patients may sit without undue discomfort; the vicinity of the trochanter, because the deeper tissues, being tendinous and aponeurotic, are unsuited for injection; and the center of the gluteal region, because there is a possibility of puncturing the gluteal vessels or the sciatic nerve. Our choice is consequently restricted practically to two areas on either side, each about three inches in diameter, and situated, the one just to the right or left of the intergluteal fold, and the other midway on a line connecting the upper end of the fold with the anterior superior spine of the ilium. I have made a great many injections in both of these two areas without ever wounding any important vessel or nerve, and with but little pain or discomfort to the patients."

The best syringe for these injections is one made entirely of glass, of small caliber, and graduated to fractions of a minim, such as is made for tuberculin injections. The needle should be from 1½ to 3 inches in length. Steel needles are much cheaper than those of iridoplatinum, but are likely to be corroded by soluble mercurial salts.

Concerning the administration of the injections, Pulsford further writes: "The technic as far as sepsis is concerned is the same as that observed in the injection of a therapeutic serum. The sterile fluid is drawn into the syringe, and any air bubbles carefully expelled. Then the skin having been properly cleansed, the needle is thrust through it in a perpendicular direction so as to reach the required depth at a single stroke. Next assure yourself that the point of the needle does not lie in a vein, by detaching the barrel and watching the lumen for a moment. If blood flows through the needle, make another puncture; otherwise replace the syringe and proceed with the injection. It is not necessary to massage the injected mass. The most careful practice is to make the injections with the patient lying face downward, but those well accustomed to the procedure may be properly injected standing, provided they are required to relax the gluteal muscles. The dressing of the puncture is necessary only when bleeding occurs."

The preparations of mercury used in this way includes both soluble and insoluble salts. The most useful soluble salts are the benzoate and the biniodid. These are well tolerated and efficient, and all others are superfluous, in the opinion of Levy-Bing, as expressed in his monograph on intramuscular mercurial injections, published in Paris, in 1909. The salts mentioned are used in 1 or 2 per cent. solution, in isotonic saline solution. The insoluble salts most frequently used are the basic salicylate, calomel and grey oil, the latter being an emulsion of metallic mercury in an oily vehicle. "The vehicle for calomel and the salicylate may be either an oil or a mucilage. In my experience the combination recommended by Levy-Bing of 3 parts of anhydrous wool-fat with 7 of white liquid petrolatum has proved satisfactory. It is most important that all these substances be pure and neutral. Calomel should be especially pure, and should be washed in boiling alcohol before being incorporated with the vehicle, and both calomel and mercury salicylate should be finely divided by prolonged trituration with the menstruum.

But of these preparations may be sterilized in a water-bath; the grey oil, however, is spoiled by heat and consequently must be prepared from sterile materials with sterile utensils and under aseptic conditions. As the process consists of a trituration of the mercury with the wool-fat for at least two hours, it may be imagined what a formidable task this is. If carefully guarded from contamination these injection fluids need not be repeatedly sterilized." (Pulsford)

Injections of soluble salts should be used when rapid mercurialization is required. They may be used at the beginning of treatment. The insoluble salts are indicated in the routine treatment of most cases. Calomel is usually more effective in urgent cases, but it causes too much pain to use in ordinary cases, in which the salicylate and the grey oil are preferable.

In beginning treatment it may be necessary to give an injection every day for a few days; but afterwards a weekly injection will be sufficient.

The average weekly dose is 1 grain of metallic mercury, 1 1/6 grains of calomel, or 1⅔ grains of salicylate of mercury.

Among the disadvantages of this form of treatment should be noticed the fact that they are more or less painful. With the soluble salts the pain begins at once and lasts for from 1 to 6 hours. With insoluble preparations it begins within an hour, and lasts from 2 to 5 days. The pain is most severe after calomel, and least so after grey oil, which is often entirely painless.

Hard masses of exudates, known as nodes, sometimes forms about the injected mass. These often retain a part of the injected fluid, which may subsequently be suddenly absorbed.

Embolism sometimes results from the injection of the fluid into a vein. Although this has rarely, if ever, proved fatal, it should be avoided. Abscesses rarely occur if the injections are properly administered.

The points of superiority over other methods of administration are that it enables the physician to introduce promptly into the general circulation a definite amount of mercury. It cannot be vomited, nor does it form insoluble combinations with the food or secretions, or pass through the alimentary canal and entirely escape absorption. It does not cause enteritis, nor does it become lodged in the liver, with the danger of being suddenly passed into the circulation in excessive amount. It does not cause diarrhea or loss of appetite. It has the advantage over inunctions that it does not cause irritation of the skin or dermatitis.

Intramuscular injections of mercury should not be used in patients who have excessive dental caries. Injections of insoluble salts should not be used in patients who are the victims of tuberculosis, nephritis, diabetes, hepatic disease, or cachexia. It should not be attempted to apply this treatment to patients who are unable to make personal visits to the physician at least once a week.

Whatever method of administering mercury is adopted, certain general hygienic rules must always be observed. The teeth must be put into good condition and the mouth must be kept clean. Chewing tobacco must be absolutely interdicted. Moderate smoking and temperate drinking may be allowed to those who are accustomed to the use of tobacco and alcoholic drinks, unless some special condition renders it advisable to discontinue their use entirely.

The Electrostatic Treatment of Lupus.—J. A. Voorthuis (*Proc. Roy. Med. Soc.*, February, 1910), has obtained good results in the treatment of lupus with static electricity after the method of Suchier. The process begins with thorough cleansing and disinfection of the parts to be treated. Under local or general anesthesia the tuberculous granulations are removed by strong, sharp curettes. After the bleeding has ceased and the wound has become almost dry the patient is connected with a metallic electrode in connection with the negative pole of the static machine. A pointed electrode connected with the positive pole is placed on the skin in the neighborhood of the wound and the circuit opened. Lifting the positive electrode 1 mm. from the skin the spark is seen and it is directed on every part of the wound. In five or ten minutes the wound is covered with a brownish crust, surrounded by an anemic ring of healthy skin. There is slight swelling, but this disappears in a few hours. Serum is often secreted, which should be absorbed by an aseptic tampon. The wound is then dry and no bandage is required. In a few weeks the crust is loosened and epidermization has taken place under it. A flat, pink scar is left, which in a few weeks becomes white. The application is not painful. A spot the size of a shilling requires treatment for half an hour. The cure takes much less time than the Finsen treatment. The difficulty is in removing all the granulations with the curette. It is possible also to use the spark inside the cavities of the nose and mouth, by means of a small glass tube and a copper wire. The effect must be due to the heat. By this method heat is continually created by means of proximity of wound and electrode, and it can be continued indefinitely without damage to the patient. Whether the speed of the ions, the stress of the current and the light concur in the effect is not determined.

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THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

VII. MEDICAL EDUCATION

The low educational standards which have obtained and which to a large degree still obtain in many American medical schools have long been deplored. It was not to be expected that a new and rapidly developing country like this should at once have schools of the same high grade as those found in the older countries: but there was no legitimate excuse for the fact that conditions with us were worse than in any of the other new countries—Canada, Australia, New Zealand, etc. The lack of legal restrictions in the organization and incorporation of medical colleges undoubtedly has been largely responsible for the existence of the great number of mediocre and low-grade medical educational institutions. As is well known the birth of the American Medical Association was the result of a convention called in May, 1846, to consider the subject of a higher standard of medical education. After the Association was formed, this subject was the principal topic in the annual discussions, and there are very few of the reports of the transactions that do not contain some discussion or some resolution on the subject. It would be hardly correct to say that these continued efforts of the Association accomplished nothing, since the resolutions and discussions directed attention to the deplorable conditions existing and many colleges did raise their standards, both of entrance requirements and of pedagogic efficiency. But the greater number did not raise them, and in such colleges students were admitted with little more, or even less, than a common school education; and they were graduated with the merest smattering of medical knowledge. In spite of pleas for higher standards the number of these low-grade schools increased until there were practically as many medical colleges in the United States as in all other countries combined. The attempts by the more progressive members of the American Medical Association to bring about a reform in the conditions that existed were rendered largely ineffective by the fact that the Association itself was dominated by representatives of the very institutions which needed reforming.

Such were the conditions when the reorganization of the American medical profession took place. After the reorganization, however, a new order of things was brought about. A special body was created—the House of Delegates—whose function is to transact the business of the Association; the members of this body are not direct representatives of proprietary medical colleges, but are representatives of the profession as a whole and therefore less likely to be biased in their efforts to carry out the objects of the Association.

Under these new conditions, in 1902, a committee on medical education was appointed similar to those formed in previous years but with far different results. In its report in 1904, this committee, recognizing the futility of temporary bodies, recommended the appointment of a permanent council with funds at its disposal to carry on its work. This recommendation was adopted; the Council on Medical Education was created; provision was made for the employment of a secretary who would devote all his time to the work; and an appropriation was made to meet the necessary expenses. Instead, therefore, of the short-lived, isolated efforts of temporary committees, however excellent their work, there was now an opportunity for steady continuous effort by a permanent body.

Recognizing from the first that its chief function was to obtain and publish facts regarding medical education, the Council immediately took steps to procure reliable information regarding medical standards and medical teaching institutions both at home and abroad. Lists of colleges were prepared, copies of their announcements secured and permanent files arranged; information was obtained regarding the entrance standards, the length of medical courses, the character of the college curricula and the requirements for graduation; copies of the medical laws and statements regarding the licensing of physicians in each state and in every foreign country were collected; in fact, official and reliable information bearing on all phases of medical education in this and other countries was obtained from every available source. The Council naturally took over the work, begun in 1901 by The Journal, of obtaining data regarding the number of students attending medical colleges, the number of graduates and other information relating to medical education, and published in the annual Educational Number of The Journal. It likewise assumed the responsibility of securing official statistics from state examining and licensing bodies, a work which was begun by The Journal in 1903, and on which were based the tables showing the successes and failures of medical college graduates. This matter also is published annually in the State Board Number of THE JOURNAL, of which this issue is an example.

In addition to the data regarding medical colleges in the United States, the Council also compiled the first complete list of foreign medical colleges—a list which revealed the startling fact that there were practically as many colleges in the United States as in all other countries combined. This systematic collection of educational data has been continued from year to year, with the result that an abundance of valuable information has been obtained regarding medical education, medical teaching institutions and regulations governing the licensing of physicians in this and other countries. In fact, it is no exaggeration to say that there is now more information on these topics to be found in the educational department of the American Medical Association than in any other one place. The result is that the Council is now recognized, both at home and abroad, as an important source of information regarding medical education, and requests for such information are received daily.

The collection of information, however, by no means represents the extent of the Council's activities. From time to time it appointed special committees which submitted reports on preliminary education, the granting of advanced standing for work done in colleges of liberal arts, a model medical curriculum, the character of the state license examination and the use of practical tests, a model medical practice act and other important topics. Probably the most notable of these was the special committee on medical curriculum consisting of one hundred leading medical educators of the United States, assisted by a large number of other leaders in medical education acting in an auxiliary capacity.

Another important feature of the Council's work has been an annual conference on medical education which has been largely attended by members of the state licensing boards, by delegates of state medical associations, by officers of the United States governmental services and by representatives of medical colleges, universities and educational organizations, every section of the country being fully represented. At these conferences the Council presented reports of its work, calling particular attention to conditions of medical education and medical registration in the various states. These conferences have furnished an opportunity for a thorough discussion of all reports and methods of procedure and have been of great value to the Council in the formulation of its standards.

The most important work of the Council, however, is yet to be described. Almost at the outset it became evident that medical college catalogues and announcements, as a rule, could not be relied on to reveal actual conditions or to furnish data on which standards could be based. It was decided, therefore, to inspect, personally, all colleges and thus to obtain information at first hand. After the preparation of an outline of the points to be considered in the study of each college, this work of inspection was begun and during the college session of 1906-7, the personal inspection—the first ever made by any organization of all the medical colleges in the United States—was completed. Since then a second tour of inspection, which included the medical schools of Canada also has been completed. The conditions revealed by these inspections were far from creditable to the schools as a whole. Although a number of high-grade, fully equipped and excellently conducted medical colleges were found, there were many which were seriously deficient both in the quality and in the amount of work done. Several were found devoid of laboratory and clinical facilities, the sole equipment in some instances being a desk, a typewriter and some chairs. In some of the larger colleges the didactic curriculum of thirty years ago was being continued; instead, however, of giving the same course of lectures to two classes in two separate years they were now giving the same course to four classes in four separate years.

The collection, and, still more, the publication of these educational data, have had a tremendous effect on the standards of medical education. The publication of facts regarding medical licensure in the various states has aided in the movement toward higher, more uniform and more effective laws and methods in the licensing of physicians. The publication of statistics regarding tuition fees of colleges has answered the "poor boy" argument so frequently used as an excuse for conducting low-grade colleges. It has been shown that, for the same or even for less money than he would pay in a low-grade college, the student could secure a thorough training in a good, well-equipped medical school. The Council has shown that in practically every other country, thorough courses in the pre-medical sciences are required of every prospective medical student. The result of the publishing these facts has been that instead of only three medical colleges which require for matriculation a preliminary education in advance of the ordinary high-school course, there are now twenty-four having that requirement; and by the beginning of the next college session this number will doubtless be increased to forty or more. In addition seven state licensing boards now insist that applicants shall have had one or two years of college work preliminary to their medical course.

The publication of statistics showing the unsatisfactory conditions has had much to do with the rapid reduction in the number of medical colleges. This has fallen from 166 to 132, although it must be admitted that the decrease in the demand for physicians has also had considerable influence. As a result of the mere publication of actual conditions, several colleges voluntarily have closed their doors in order that higher standards and improved methods of teaching might prevail and a number have been closed by the action of state licensing boards. A greater reduction in the number of schools, however, was through voluntary mergers in several cities of two or more colleges, forming in each instance one stronger and better equipped college. By this process of merging, in the last six years *forty-four* colleges have been replaced by nineteen institutions of higher grade.

The chief function of the Council, as already stated, is to obtain and to publish facts regarding medical education; and such publicity can result only in good to medical education in general. There is no desire to criticize any individual college for the Council fully recognizes the difficulties against which individual colleges have had to contend in their efforts to make improvements. It is encouraging to note that the majority of colleges have welcomed investigation, have invited a publication of the facts, and have greatly aided the Council in its work. It is to be regretted, however, that some medical colleges remain which may not welcome the presentation of facts and which may be injured thereby. We may apply to this educational situation what President Taft recently said of the commercial world: All business should be made legitimate so that laws for the general good will not injure that business. Similarly it may be said that those colleges which fear [illegible]ity should make such improvements in their methods and equipment that the publication of facts will not injure them. Curiously enough, some of the lowest-grade medical colleges inspected by the Council were, in the opinion of their deans, "the best in the country," which points the truth of a statement made recently by the United States Commissioner of Education,[1] that the people not only need protection against those who use false pretenses in the realm of education but also against those who *offer an inferior grade of instruction, under the delusion that it is as good as the best.* "The *well-meaning* no less than the dishonest [illegible] some impartial test by which their educational tio[illegible] [illegible]oved, of what sort it is."

tering [illegible] to be done and while there are higher [illegible] deficient medical schools, increased [illegible] has been decidedly colleges in th[illegible] **few years.** [illegible]ce requirements combined. The a[illegible] **better enforced**, college terms have been lengthened, new buildings and hospitals have been erected, new laboratories have been added and old laboratories better equipped, libraries and museums have been developed, a much larger number of expert, full-time salaried instructors has been secured and better methods of teaching have been adopted. In fact, so many have been the improvements in medical education as to warrant the assertion that more has been accomplished in the past six years than in all of the previous sixty years of the Association's existence; and it is gratifying in the extreme to those who have long struggled and pleaded for higher and better standards of medical education to see, at last, so much already accomplished and the outlook so bright for still greater things in the future.

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Of course this work has created some opposition to, and in a few cases active antagonism against the American Medical Association. Exposing the weakness of some institutions affected powerful interests and, naturally, friction resulted. In the vast majority of cases, however—and this is but another illustration of the altruism that pervades the medical profession—the very evident need of such changes has been recognized and the efforts of the Council on Medical Education have been heartily endorsed and its work materially aided.

A MONUMENT TO MEDICAL HEROES

An article entitled "The Public's Forgetfulness," in the *Outlook*, Aug. 11, 1906, called attention to the heroic character and beneficent results of the work of the Army Yellow Fever Commission in Cuba in 1900, and urged some recognition by the nation of the achievement and of the courage of those who had submitted to experimental infections in the course of these investigations. This article attracted the attention of President Roosevelt, who, after obtaining a full and authoritative report on the subject from the War Department, sent a message to Congress which was probably the briefest he ever wrote. It was as follows:

> THE WHITE HOUSE, Dec. 5, 1906.
>
> *To the Senate and House of Representatives:*—The enclosed papers are transmitted to the Congress in the earnest hope that it will take suitable action in the matter. Major Reed's part in the experiments which resulted in teaching us how to cope with yellow fever were such as to render mankind his debtor and this nation should in some proper fashion bear witness to this fact.
>
> THEODORE ROOSEVELT.

Senator Owen of Oklahoma, who has already given evidence of his interest in a matter of great practical importance to the public weal by advocating the creation of a department of health, has now shown himself equally appreciative of educational and moral values by the introduction of a bill (S. 8024) which will put into execution the recommendation of that message. It appropriates the sum of $50,000 for a statue in Washington "in honor of the Yellow Fever Commission composed of Major Walter Reed, Surgeon, U. S. Army, Dr. James Carroll, Dr. Jesse W. Lazear and Dr. Aristides Agramonte, Acting Assistant Surgeons, U. S. Army, and the placing on the pedestal a bronze tablet in memory of the men who consented and assisted by the voluntary exposure of their persons in making the experiments which resulted in the discovery of the means whereby yellow fever is disseminated; the site to be selected and the pedestal and statue to be erected by and under the supervision of a commission composed of the President of the American Medical Association, the Secretary of War, Major-General Leonard Wood, U. S. Army, the Surgeon General, U. S. Army, and Colonel William C. Gorgas, Medical Corps, U. S. Army."

Congress has erected in the Capital City many statues to celebrated Americans, and the generous foreigners who assisted in our war for independence have not been forgotten. These have been chiefly men of the sword, and no man whose mission has been the saving of life, has been as yet so honored by our national legislature, although by private subscriptions statues have been raised to Rush, to Cross and to Hahnemann.

The time seems ripe for this action, as a decade has now passed since the commission published its findings to the world and all of them have been fully accepted by scientific men. Three of the members of the commission are dead; the fourth, Dr. Agramonte, is a distinguished professor in the university of Havana.[1]

It is pleasing to see that the proper interest of the American Medical Association in the erection of this monument is recognized by the naming of its president as the head of the commission to which the execution of the work is entrusted.

COLLECTION AND VALUE OF STATE BOARD STATISTICS

We present this week tabulated statistics based on examinations conducted by State Medical Examining and Licensing Boards. With the exception of one report from Alabama, for which the list of failures could not be obtained, the returns are complete. The four large tables, A, B, C, and D, give the results in detail, while tables E to M, inclusive, give important deductions from these tables. Table M gives the totals registered by each board by all methods, examination, on credentials, through reciprocity and otherwise, while Table N shows the registrations by reciprocity.

Tables I, J and K give the various medical colleges classified according to the percentage of failures (below 10 per cent., between 10 and 20 per cent. or above 20 per cent.). Although no positive conclusion can be formed in regard to any college on the basis of these statistics alone, nevertheless the deductions which they invite are surprisingly in agreement with the conclusions resulting from the thorough investigation and inspection of medical colleges conducted during the past five years by the Council on Medical Education. The fact that a few medical colleges of inferior grade, conducted largely by quiz-class methods, succeed in obtaining low percentages of failures and appear in Table I, points towards the necessity of changing the character of the state license examination so that actual knowledge—not theoretical knowledge obtained by "cramming"—shall be necessary to pass it.

These statistics are of great value and throw much light on several factors in medical education and medical licensure. The publication of the failures of graduates of the colleges has stimulated the colleges to better work, and efforts have been made to find and strengthen the weak places in their courses of instruction. The very fact that the reports are called for regularly has tended to unify the various systems of records kept by state licensing boards, while in some states records are now kept whereas previously they were not.

Furthermore, from the official data regarding medical college graduates, the Council on Medical Education, which now has charge of the collection and tabulation of these statistics, has been able to check up the state board reports, thereby rendering the tabulated statistics more accurate, making it certain that failures at examinations are not charged against the wrong college, and insuring a greater accuracy of state records. These statistics, therefore, not only have helped in the betterment of medical education, but also have led to the adoption of more uniform methods of record-keeping in the various states. Before THE JOURNAL began the publication of these statistics the accurate information, which can now be readily obtained, concerning the number of physicians registered each year in each state or in the United States was not anywhere available.

Probably no one has recognized the value of these statistics more than the state licensing boards themselves, who, through the furnishing regularly of carefully prepared reports have made possible the publication of this valuable information.

IMPROVED MEDICAL EDUCATION AT ST. LOUIS

Another evidence of the rapid improvement of medical education in this country is found in the action of the directors of Washington University, St. Louis, in reorganizing its medical department on a broad, strong basis. This action has been made possible by the union of a large general hospital and of a children's hospital with the medical school, and by gifts for medical, laboratory and clinical buildings aggregating, with the endowment, over six million dollars. The principal contributors to the endowment are Adolphus Busch, William K. Bixby, Edward Mallinckrodt and Robert S. Brookings.

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[1] Any one who is interested and desires to know all the facts relative to the work of the Yellow Fever Commission should obtain from his congressman or senator a copy of the document (Senate Document No. 520, 61st Congress, 2nd Session) which accompanied the introduction of the bill. This pamphlet contains the president's message and accompanying documents, including valuable official data.

A large tract of land at the east end of Forest Park has been secured, on or near which all the hospital and college buildings will be erected. In addition to the general hospital and the children's hospital it is proposed to erect laboratory and clinical buildings with dispensary facilities, and within a short time also a maternity hospital. It is stated that all hospitals are to be fully used for teaching purposes, the relation to be substantially the same as that which exists between the hospitals and the medical school of the Johns Hopkins University. New buildings throughout of modern construction and arrangement have been planned.

The university is to select the medical staffs of the hospitals and is seeking the ablest men for the leading chairs of the college. Among those already selected are: Dr. George Dock, formerly of the University of Michigan, now of Tulane University, New Orleans, for the chair of medicine; Dr. John Howland, of the University and Bellevue Hospital Medical College, New York, and a member of the Council on Pharmacy and Chemistry of the American Medical Association, the chair of pediatrics; Dr. Eugene L. Opie, pathologist at the Rockefeller Institute of Medical Research, the chair of pathology; and Dr. Joseph Erlanger, of the University of Wisconsin, the chair of physiology. The selection of men for the chairs of surgery, medical chemistry, preventive medicine and pharmacology is proposed in the near future and also of a number of able permanent assistants and a large and strong staff for supplementary teaching work and for the dispensary and hospital service. All the men who have been added to the faculty are to assume their duties within a year.

It is significant that the entrance requirements are not to be extreme. Beginning this fall one year of collegiate work will be required in addition to a four year high school education and this by the fall of 1912 will be further increased to two years of collegiate work. The plan to have all buildings, laboratory, clinical, hospitals and dispensaries, in one group and of easy access as well as the character of the men being selected to fill the various chairs give promise of a medical college of the first rank. Furthermore the location of a school of this character in St. Louis is sure to have a profound influence on medical education throughout the middle West and the South. Finally this generous provision for the development of medical education at Washington University is another encouraging indication that men of wealth are awakening to the necessity of endowments for medical education.

Prognosis in Appendicitis in Children.—The prognosis of appendicitis in children is influenced very materially by a number of factors; *e. g.*, age, difficulty in diagnosis, rapidity of its progress, delayed operation, and the lessened resistance to bacterial invasion on the part of very young children. Next to delay, age [illegible] more than any other factor, determines the outcome. [illegible]reased [illegible]ger the child, the worse the prognosis. —J. M. T. Fi[illegible] *Dominion Journal of Medicine and Surgery* [illegible]ber, 1909.

Medical News

CALIFORNIA

Cooper College Graduates.—On May 5, the annual commencement exercises of Cooper Medical College, San Francisco, were held, and a class of seventeen was graduated. Dr. Henry Gibbons, Jr., dean of the college, introduced the president, Dr. Edward R. Taylor, who conferred the degrees.

Personal.—Dr. Charles V. Cross has been appointed president; Dr. Thurlow S. Miller, secretary, and Dr. Edwin C. Van Dyke, treasurer, of the reorganized Board of United States Examining Surgeons for San Francisco.——Dr. George L. Cole has been appointed a member of the board of health of Los Angeles, vice Dr. William J. Chambers, resigned.

Hospital Notes.—With the completion of the group of county hospital buildings, Los Angeles County will have expended $300,000 in this work. The completed buildings will contain an administration building, surgical ward, three medical wards, tuberculosis building, contagious ward, insane ward, nurses' quarters, superintendent's residence, etc. At present there are under construction an additional story to the lecture hall, a twenty-room additional building for nurses, and a new operating pavilion and a chapel.——The Mills heirs have given $1,000,000 for the endowment of St. Luke's Hospital, San Francisco.——Two hundred women of Oakland, Alameda and Berkeley, on May 2, began a ten-day campaign under the direction of the King's Daughters of California to raise $100,000 by popular subscription, with which to erect and equip a new building for the home for incurables.

ILLINOIS

Physician Goes to Prison.—Dr. William H. Miller, convicted of the murder of John Saylor, Crescent City, and sentenced to twelve years' imprisonment in the state penitentiary, was taken to Joliet, May 10, to begin his sentence.

Hospital Notes.—Work on the annex of St. Vincent's Hospital, Taylorville, began April 28. The annex will contain a maternity ward of five rooms, and will increase the capacity of the hospital to a total of seventy.——Rockford Hospital, in its report for the year ended January 1, announces that it closed with a deficit of about $1,500, most of which was made up of outstanding obligations of patients.

Chicago

Personal.—Dr. Henry R. Harrower, formerly editor of the *Medical Standard*, has severed his connection with that journal, and is now conducting a new periodical, the *American Journal of Physiologic Therapeutics*.

College Merger.—It is reported that a merger has been completed between the Bennett Medical College and the Illinois Medical College, the latter of which recently became the Medical Department of Loyola University. The new school will retain the name of the Bennett Medical College.

Chicago Tuberculosis Institute.—A new medical building has been opened at Edwards Sanatorium, Naperville, Ill., a department of the Chicago Tuberculosis Institute. The sanatorium at present consists of a forty-acre farm, with a general administration building, medical building, six open-air shacks and individual tents. The institution, at present, can accommodate sixty patients.

More About the Diploma Mill.—At the instance of the State Board of Health, Dr. Alexander Chittick, secretary of the "Chicago Medical University," E. J. Barnes, and N. O. Bourque, associated with Dr. Chittick in the "Crescent Medical University," were arrested, May 13, charged with fraudulent use of the mails. The defendants were taken before United States Commissioner Foote, their case was set for hearing May 23, and they were released on bail. It is claimed that these institutions, which are said to exist only on paper, sell diplomas in medicine, pharmacy, dentistry, osteopathy, etc., at prices ranging from $6 to $40.

Ricketts Memorial Service.—A memorial service for Dr. Howard Taylor Ricketts, assistant professor of pathology in the university, was held in the Leon Mandel Hall, University of Chicago, May 15. Dr. Henry Pratt Judson read a letter from the Bureau of Education of Mexico expressing appreciation of the work of Dr. Ricketts, and mentioning the honors conferred on him. He also made a brief address on the work of Dr. Ricketts, and the essential facts of his life and death were given by Dr. Russell M. Wilder, who was associated with Dr. Ricketts in his work in Mexico. Dr. Ludvig Hektoen delivered an address on the personality of Dr. Ricketts and the nature and value of the work. Prof. Charles Henderson of the University spoke on the humanitarian aspects of Dr. Ricketts' work and his death. The meeting was largely attended.

IOWA

Women's Medical Clinic.—A free daily clinic has been established by women physicians and club women of Des Moines in the Century Building, under the charge of women physicians of the city.

Society Meetings.—At the annual meeting of Tama County Medical Society, held in Toledo April 12, Dr. Walter J. McEvilly, Dysart, was elected president; Dr. Arthur A. Pace, Elberon, vice-president; Dr. William C. Wagner, Traer, secretary-treasurer, and Dr. Thomas L. Thomson, Toledo, delegate to the state society.——At the annual meeting of the Southeastern Linn Medical Association, held in Mount Vernon, April 12, Dr. Calvin G. Stookey, Mechanicsville, was elected president; Dr. Francis F. Ebersole, Mount Vernon, vice-president, and Dr. Kate Mason Hogle, Mount Vernon, secretary-treasurer.

KANSAS

Personal.—Dr. George L. A. Hamilton, Kansas City, has gone abroad.——Dr. G. D. Pendell has located in Wellington.——Dr. Harry A. Vincent, Perth, has gone to Florida for two months. ——Dr. Edwin T. Shelly, Atchison, is reported to be seriously ill with erysipelas.

State Society Meeting.—At the forty-fourth annual meeting of the Kansas Medical Society, held in Topeka, May 4-6, under the presidency of Dr. Oliver J. Furst, Peabody, the subject of whose address was "Public Knowledge of the Medical Profession," the following officers were elected: President, Dr. O. Portis Davis, Topeka; vice-presidents, Drs. Millard F. Jarrett, Fort Scott; George W. Jones, Lawrence, and John T. Axtell, Newton; secretary, Dr. Charles S. Huffman, Columbus (reelected), and treasurer, Dr. Lewis H. Munn, Topeka.

KENTUCKY

Personal.—Dr. J. A. Boyd, Paducah, was shot in the arm and painfully wounded by Dr. Charles E. Purcell during an altercation recently.——Dr. John W. Pendley, Paducah, county physician of McCracken county, was stricken with cerebral hemorrhage while attending his sister at Spencer, S. D.

Wins Suit Against College.—In the suit brought by Dr. Harry A. Davidson against the Hospital College of Medicine, in which he sought the cancellation of notes amounting to $3,000, which he had pledged himself to pay, in consideration of receiving the chair of physiology and diseases of women, and an interest in the property of the school, the judge is said to have decided that the college must cancel the notes.

LOUISIANA

Permit for Hospital.—The city council of New Orleans has granted a permit to the Colored Baptist Sanitarium to operate a hospital at 122 South Howard street.

Asks Additonal Inspectors.—Dr. William T. O'Reilly of the city board of health of New Orleans, has asked for an appropriation of $12,800 for the employment of more inspectors and to enable the board to enforce the mosquito screen ordinance.

House of Delegates Meeting.—The annual meeting of the House of Delegates of the State Medical Society was held May 2. A new constitution and by-laws was adopted. Dr. John Callan, New Orleans, was elected president, and Dr. Joseph D. Martin, New Orleans, secretary.

State Medical Society Meeting.—The thirty-first annual meeting of the Louisiana State Medical Society was held in New Orleans, May 3-5. On the first day symposia on dysentery and uncinariasis were held. At the evening session pellagra was discussed. The following officers were elected: Dr. Edwin J. Graner, New Orleans, president; Drs. Allan C. Eustis, Abbeville, Homer Dupuy, New Orleans, and Samuel A. Ayo, Thibodeaux, vice-presidents; Dr. Joseph D. Martin, New Orleans, secretary; Dr. Charles C. Bass, New Orleans, treasurer (reelected), and Dr. Isaac J. Newton, Monroe, councilor. The next meeting will be held in Shreveport.

MARYLAND

State Board of Health Election.—At the annual meeting of the State Board of Health, Dr. William H. Welch, Baltimore, and all the other officers were reelected. Dr. Marshall L. Price, secretary of the board, was selected as delegate to the American Medical Association.

Personal.—Dr. Frederick N. Nichols, Denton, has been appointed health officer of Caroline county.——Dr. Edward R. Trippe has been appointed health officer of Easton, and Dr. Philip L. Travers, physician to the county jail, Easton.——Dr. John E. Legge, Oakland, while cranking his automobile recently, fractured his arm.——Dr. Charles F. Goodell, Frederick, has been reelected health officer of Frederick county.——Dr. Elmer C. Kefauver has been elected town physician of Thurmont.——Drs. Lewis K. Woodward and Jesse S. Meyers have been elected members of the city council of Westminster.

Baltimore

Hospital News.—Through the efforts of the managers and auxiliary, $18,000 of the mortgage on the Johns Street Hospital for Women of Maryland have been paid off. An indebtedness of $22,000 still remains.

Dispensary Election.—At the annual meeting of the Baltimore Eastern Dispensary, May 9, Dr. Robert S. Kirk was elected superintendent for the twelfth time. Dr. John Roth was elected assistant superintendent, Dr. Daniel W. Cathell, vice-president, and Dr. Frank C. Bressler, a director.

Personal.—Lieutenant Howard E. Ashbury has been promoted to captain in the medical corps of the Maryland National Guard, and Drs. William P. Morrill and Lloyd P. Shippen have been appointed lieutenants and assistant surgeons.——Dr. Hugh H. Young has been elected secretary of the trustees of the new negro hospital for the indigent insane.

MASSACHUSETTS

Personal.—Dr. Frederick L. Hills, superintendent of the Massachusetts State Sanatorium, Rutland, has resigned to accept the superintendency of the Eastern Maine Insane Hospital, Bangor.——Dr. Francis X. Mahoney, Dorchester, has been appointed health commissioner of Boston.

State Society Meeting.—The one hundred and twenty-fifth annual meeting of the Massachusetts Medical Society will be held in Boston, June 7 and 8. The Shattuck Lecture will be delivered by Dr. Frederick H. Gerrish, Portland, Maine, on the "Crusade Against Syphilis and Gonorrhea," and the annual discourse will be delivered by Dr. John C. Munro, Boston.

MICHIGAN

Personal.—Dr. John L. Burkart, for a number of years acting assistant surgeon U. S. Army, with Philippine service, has opened an office in Big Rapids.——Dr. John A. Keho, Bay City, has been appointed a member of the board of health, vice Dr. William R. Ballard, resigned.——Dr. Clarence B. Wasson has been appointed health officer of Bellevue, vice Dr. Albert S. Wilson.——Dr. Perry M. Schurtz, retiring president of the board of health of Grand Rapids, was presented on May 5 with a diamond ring and set of cuff-links by the members of the board of health.——Dr. Earl V. McComb has been appointed health officer of Menominee.——Dr. A. Henri Cote has been elected city physician of Port Huron.——Dr. Victor C. Vaughan, dean of the Medical Department of the University of Michigan, was the guest of honor at a dinner of the University of Michigan Kansas City Club, May 2.

MISSOURI

Library for Medical Society.—The library of the late Dr. Jonathan E. Tefft, Springfield, has been presented by Mrs. Tefft to the Greene County Medical Society.

Southeastern Physicians Meet.—The Southeastern Missouri Medical Association met in Morehouse, May 3 and 4, and elected the following officers: President, Dr. Oba Haley, Fredericktown; recording secretary, Dr. William S. Hutton, Illmo; corresponding secretary, Dr. Thomas C. Allen, Bernie, and treasurer, Dr. William R. Goodykoontz, Caledonia.

Southwestern Physicians Elect.—At the annual meeting of the Southwestern Missouri Medical Association, held in Springfield, April 28 and 29, the following officers were elected: President, Dr. William J. Rabenau, Fordland; vice-presidents, Drs. Oscar N. Carter, Republic, and James E. Dewey, Springfield; secretary, Dr. Herbert S. Hill, Springfield, and treasurer, Dr. Lee Cox, Springfield, the two latter being reelected. Dr. James E. Loafman, Bolivar, delivered the oration on medicine, and Dr. Benjamin F. Fortner, Springfield, the oration on surgery.

St. Louis

Commendatory Resolutions.—The St. Louis Medical Society has adopted resolutions commending the council and house of delegates and mayor for the passage and signing of bills changing the management of the city eleemosynary institutions.

Hospital Merger.—The merger is announced of the Martha Parsons Hospital with the St. Louis Children's Hospital. The new institution will form part of the hospital group of Washington University Medical School, and will be housed in a new building on Kingshighway, valued at $125,000.

MONTANA

State Meeting.—The thirty-second annual meeting of the Montana State Medical Association was held in Hunter's Hot Springs, May 11 and 12, under the presidency of Dr. Thomas D. Tuttle, Helena. The officers elected were: President, Dr. William F. Cogswell, Livingston; vice-presidents, Drs. Thomas C. Witherspoon, Butte; Irvin, Great Falls, and Oscar M. Lanstrum, Helena; secretary, Dr. Herbert D. Kistler, Butte (reelected; treasurer, Dr. Creswell T. Pigot, Butte (reelected); delegate to the American Medical Association, Dr. Thomas D. Tuttle, Helena, and alternate, Dr. Thomas C. Witherspoon, Butte. Butte was selected as the next meeting-place.

NEW YORK

Is Christian Science Healing Forbidden?—An amendment to the New York state medical law which was rushed through the assembly May 5, is giving the Eddyites considerable alarm. The bill passed three years ago allowing only registered physicians to practice medicine had this exception, "This article shall not be construed to affect the practice of the religious tenets of any church." In the recent amendment introduced by Assemblyman Wilkie of Erie this exception is made to read, "This article shall not be construed to affect the practice of circumcision as the religious tenet of any church." The Eddyites are making strenuous efforts to stop this bill in the senate.

New York City

Import Measles.—The steamship *Carpathia* of the Cunard line recently arrived from the Mediterranean with 40 cases of well-developed measles among her 2,200 steerage passengers. Only the children in the steerage were affected. A few months ago a German steamer arrived with 130 cases of measles on board.

Personal.—The reception that was to have been given to Dr. John J. McPhee by the Canadian Society of New York has been indefinitely postponed on account of the death of King Edward.——Dr. Roswell Park, who has been ill with pneumonia in this city, has recovered sufficiently to return to his home in Buffalo.——Dr. and Mrs. George Woolsey and Dr. Howard S. Paine, Glens Falls, have gone to Europe.

Resolutions Regarding Dr. Goelet.—At the meeting of the Clinical Society of the New York School of Clinical Medicine, held May 3, resolutions were adopted regarding the death of Dr. Augustin H. Goelet, for more than twenty years a member of the faculty of the institution, setting forth the high qualities of Dr. Goelet, paying a last tribute to his memory, and extending to his bereaved family the sincere sympathy of the society.

Buffalo

Fronczak to Go to Paris.—Expenses not to exceed $350 were voted Health Commissioner Francis E. Fronczak by the board of aldermen to attend the International Congress on School Hygiene in Paris, August 2-7.

NORTH DAKOTA

State Society Meeting.—The annual meeting of the North Dakota Medical Association was held in Grand Forks, May 10 and 11, under the presidency of Dr. John E. Countryman, Grafton. The following officers were elected: President, Dr. Henry H. Healy, Grand Forks; vice-presidents, Drs. Clinton E. Spicer, Litchville, Alexander J. McCannel, Minot, and Murdock MacGregor, Fargo; secretary, Dr. Hezekiah J. Rowe, Casselton (reelected); treasurer, Dr. Frank J. King, St. Thomas, and councilors, Drs. Paul Sorkness, Fargo; William F. Sihler, Devils Lake, and Robert D. Campbell, Grand Forks.

OHIO

State Association Meeting.—The Ohio State Medical Association at its sixty-fifth annual meeting, held in Toledo, May 11-13, under the presidency of Dr. Walter H. Snyder, Toledo, who in his annual address, recommended greater participation of physicians in the general life of the community, education of the public in sanitation, and changes in the supervision of state hospitals for the insane. The following officers were elected: President, Dr. Arthur J. Skeel, Cleveland; vice-presidents, Drs. Samuel P. Fetter, Portsmouth; Edgar J. March, Canton; Anderson T. Spear, Newark, and James O. Starr, Pittsburg; member of the National Legislative Council, Dr. Benjamin R. McLellan, Xenia; councilor, Second District, Dr. Robert H. Grube, Xenia, and delegates to the American Medical Association, Drs. George M. Todd, Toledo; Benjamin H. Blair, Lebanon; Dana O. Weeks, Marion; B. Frank Barnes, Newark, and John W. Clemmer, Columbus. On the night of the eleventh, a one-act comedy written by Dr. Dan Millikin, Hamilton, was presented at Zenobia Theater before the association. This is commented on in the Correspondence Department in this issue. A resolution was adopted asking the state legislature to enact a law for the sterilization of habitual criminals. The next meeting of the association will be held in Cleveland. A report of the scientific proceedings will be commenced in THE JOURNAL next week.

OKLAHOMA

Graduation Exercises.—The annual commencement exercises of Epworth College of Medicine, Oklahoma City, were held May 12, when a class of 7 was graduated.

Public Drinking Cup Abolished.—Beginning May 1, the State Board of Health abolishes the public drinking cup. Violation is made a misdemeanor punishable by a fine of from $10 to $30, or by imprisonment for thirty days in jail, or both.

Faculty Election.—At the meeting of the Board of Regents of the University of Oklahoma School of Medicine, Norman, April 13, Dr. Charles S. Bobo, Norman, was elected dean, and Drs. L. W. Curley, B. F. McLaren and Walter L. Capshaw, Norman, were elected members of the faculty.

State Society Meeting.—The eighteenth annual session of the Oklahoma State Medical Association was held in Tulsa, May 10-12, under the presidency of Dr. Walter C. Bradford, Shawnee. The following officers were elected: Dr. David A. Myers, Lawton, president; Drs. Charles L. Reeder, Tulsa, H. Marion Williams, Wellston, and James L. Shuler, Durant, vice-presidents; Dr. Claude A. Thompson, Muskogee, secretary (reelected), and Drs. W. E. Wright, Tulsa, and Charles R. Hume, Anadarko, delegates to the American Medical Association.

PENNSYLVANIA

Hospital Annex Opened.—The Phoenixville Hospital opened its new $25,000 annex, April 30, thus increasing the hospital's capacity to 75 patients. The annex was made possible by the gift of $12,000 by the late Joseph Anderson, Toughkenamon.

Milk Dealer Fined.—O. H. Walters, a milk dealer of Lower Pottsgrove, was fined $75 and costs May 13, for violating the state quarantine laws during the prevalence of scarlet fever in his house. It was charged that 16 cases of the disease resulted because he sold milk before the quarantine was lifted.

Antispitting Sign to be Used.—Pennsylvania's recommendation, made through her Health Commissioner, Dr. Samuel G. Dixon, for a uniform antispitting sign to be used in railroad coaches passing through different states, was adopted April 29, by the Conference of State and Provincial Boards of Health at Washington, D. C.

Philadelphia

Addition to Philadelphia Hospital.—The first of the new additions to the equipment of the Philadelphia General Hospital, the annex to the Nurses' Training School, was opened May 12. It is of brick and has accommodation for 40 nurses.

Chair of Surgery Endowed at Jefferson.—The trustees of Jefferson Medical College announced, May 11, a gift of $60,000 from Mrs. Maria Gross Horwitz, daughter of the late Professor Samuel D. Gross, to endow the "Samuel D. Gross Chair of Surgery."

Additions to University.—May 12, ground was broken for a group of laboratory buildings for the University Hospital, on the university campus, south side of Pine street, east of Thirty-seventh street. The total cost will be $37,000. The plans provide for a series of one-story buildings.

Fire in Laboratory.—A fire in the chemical laboratory of the Medico-Chirurgical College caused great damage in three-quarters of an hour and frightened many patients. About $50,000 worth of apparatus was ruined by fire and water and the total damage will amount to more than $75,000.

Gross Prize Awarded.—The Samuel D. Gross Prize of the Philadelphia Academy of Surgery for 1910, amounting to $1,500, has been awarded to Dr. Astley Paston Cooper Ashhurst of Philadelphia for his essay entitled "An Anatomic and Surgical Study of Fractures of the Lower End of the Humerus."

Tribute to Dr. Tyson.—As a farewell tribute to Dr. James Tyson, professor of medicine at the University of Pennsylvania, 300 students of the medical department gathered in his lecture room on May 13, and presented him with a silver loving-cup and large silver platter, gifts of the members of the two upper classes. It was the occasion of Dr. Tyson's last lecture and instead of an everyday class room he found the place decorated with red and blue bunting.

Personal.—Dr. Albert Magnus-Levy, of Berlin, Germany, was the guest of honor at a banquet at the Bellevue-Stratford, May 13, following his address before the College of Physicians.

Dr. George E. de Schweinitz was the host of the occasion and covers were laid for twenty-eight guests.——Dr. R. Tait McKenzie has been appointed a representative of the United States at the Third International Congress on Physical Education to be held in Brussels, Belgium, from August 10 to 13.——Drs. F. Hirst Maier, Alfred Heineberg and P. Brooke Bland have been appointed associates in gynecology in Jefferson Medical College.

Crusade Against Doped Medicines.—Christopher Koch, vice-president of the State Pharmaceutical Board, announced, May 2, that the future activities of that board would be directed against "patent medicines" with dope in them. Soothing syrups will be one of the leading points of attack, and samples have already been sent to Professor Charles H. LeWall, chemist for the board, to be analyzed. To the general use of these soothing syrups (among babies) Dr. Koch attributes the craving for cocain and other drugs among adults, who have been indulged with these syrups during infancy. Samuel M. Clement, Jr., counsel for the board, says that the traffic in cocain in this city has now been practically annihilated and that the board would now turn its efforts to obtain federal regulation of the sale of cocain, morphin and other ruinous drugs. Five more cocain prisoners were arraigned before Magistrate Beaton in City Hall, May 2.

Baby-Saving Campaign.—To concentrate the charitable forces of the city into one big child-saving campaign, a conference of nearly 200 social workers was held in the mayor's office at City Hall on May 13. A movement was started by Dr. Jesse Burke, of the Bureau of Municipal Research, to form a central committee to report the scope, limits and activity of every charity in the city. This committee will form the nucleus of a centralized registration bureau leading to the formation of a municipal bureau of child hygiene. It was shown that lack of cooperation among the various charitable organizations resulted in the city's deserving poor not receiving the benefit of funds given for their relief and of the societies being imposed on. A little over a year ago there was organized an alliance for the care of babies under the auspices of the Department of Public Health and Charities, Board of Education, Mothers' Congress, Home and School League and allied societies, for the purpose of instituting lectures, and giving practical instruction and demonstration, by means of the lecture rooms in the schoolhouses, instituting milk depots, etc., but unfortunately public education through the newspapers did not reach the particular class of people desired. The circulars left at the home frequently remained unread and the lectures reached only comparatively few. Milk dispensaries cannot be attended by the mother who has many children. The keynote of the proposition lies in the visitation of the home by trained workers, and one object of the present crusade is the part to be played by the Bureau of Municipal Research, under the guidance of Dr. Burks, who has volunteered to supply a selected section of the city with a corps of trained nurses for the purpose of home instruction.

TENNESSEE

State Board Election.—At a called meeting of the State Board of Health, May 1, Dr. Thomas E. Abernathy, Chattanooga, was elected president to fill the vacancy caused by the resignation of Dr. Heber Jones, Memphis, who had been a member of the State Health Department for 23 years. Dr. Louis Leroy, Memphis, was elected vice-president; Dr. William Litterer, Nashville, state bacteriologist; Dr. Olin West, Nashville, assistant secretary of the board in charge of the eradication of the hookworm disease, and Dr. Rufus E. Fort, Nashville, delegate to the American Medical Association.

Colleges Close Session.—The graduating exercises of the Medical Department of Vanderbilt University were held May 2, when a class of thirty-nine received diplomas from Chancellor J. H. Kirkland. The faculty address was delivered by Dr. William Litterer.——The University of Nashville Tennessee Medical Department held its annual commencement exercises May 2, when a class of sixty-five was graduated. Ex-Governor R. M. Cunningham, Alabama, delivered the annual address; Dr. Hazel Padgett, the faculty address, and President Brown Ayres of the University of Tennessee outlined the reasons prompting the combination of the two universities and its purpose for the future. Degrees were conferred by Prof. J. I. D. Hines on the graduates of the University of Nashville, and by Prof. Brown Ayres on the University of Tennessee.——The commencement exercises of the Medical School of the University of Chattanooga were held May 2, when a class of eighteen was graduated. The faculty address was delivered by Dr. J. S. B. Woolford. Hon. H. H. Ingersoll, Knoxville, delivered the commencement address, and Professor Race conferred the degrees.——Memphis Hospital Medical College graduated a class of 101, April 30. The commencement address was delivered by Hon. Earl Brewer of Clarksdale, Miss., Hon. W. H. Carroll, president of the board of directors, conferred the degrees, and Dr. William B. Rogers, dean of the college, delivered the diplomas to the graduates.——The College of Physicians and Surgeons, Memphis, held its annual graduating exercises May 2. Prof. Thomas P. Bailey delivered the commencement address, and degrees were conferred on a class of seventeen by Dr. Richard B. Maury, chancellor of the university.——A class of twenty was graduated from the Lincoln Memorial Medical College, Knoxville, May 4. Rev. J. F. Spence, LL.D., vice-president of the Medical Department, conferred the degrees.——Meharry Medical College, Nashville, graduated a class of fifty-five on April 14. The address to the graduates was delivered by Rev. R. E. Jones, D.D., New Orleans. Ground was broken for the George W. Hubbard Hospital, April 13. One wing of this structure is to be built at present, will accommodate about forty patients, and will cost about $15,000.

TEXAS

Personal.—Drs. Edwin P. Beeton, Will Cantrell, Charles T. Kennedy, Julius A. Smith, D. Richard Waddle and John W. Swindell have been elected members of the board of health of Greenville.——Dr. Gustave A. Weidemyer has been elected city physician of Taylor.

Graduation Exercises.—A class of twenty-eight received diplomas at the annual commencement exercises of the Medical Department of Fort Worth University, May 3. Dr. Charles W. Stiles, United States Public Health and Marine-Hospital Service, delivered the commencement address.——Baylor University, Dallas, held its commencement exercises April 26, graduating a class of ten. Dr. Edward H. Carey presented the medical class to President Brooks, who conferred the degrees.

State Physicians Meet.—The forty-second annual meeting of the State Medical Association of Texas was held in Dallas, May 10-12, under the presidency of Dr. Witten B. Russ, San Antonio, and the following officers were elected: President, Dr. John T. Moore, Houston; vice-presidents, Drs. Allen D. McReynolds, Stamford, and Washington A. Harper, Austin; secretary and editor of the state medical journal, Dr. Holman Taylor, *Fort Worth; treasurer*, Dr. Charles A. Smith, Tex*arkana; councilors*. Third District, Dr. David R. Fly, Amarillo; Fifth District, Dr. William A. King, San Antonio; Sixth District, Dr. Henry J. Hamilton, Laredo; Ninth District, Dr. James A. Hill, Houston; Twelfth District, Dr. Arthur C. Scott, Temple; Fifteenth District, Dr. Levi Y. Turner, Daingerfield; and delegates to the American Medical Association, Drs. Witten B. Russ, San Antonio, and Turner, Dallas. The association adopted resolutions favoring the Owen bill to create a national department of health.

VIRGINIA

Commencement.—The Medical College of Virginia held its annual commencement exercises at the Academy of Medicine, Richmond, May 18. President Lyon C. Tyler of William and Mary College delivered the commencement address. A class of forty-six was graduated.

Personal.—Dr. Alick T. Smith has succeeded Dr. Thomas G. Pretlow as city physician of Richmond.——Dr. Albert S. Priddy, formerly superintendent of the Southwestern State Hospital for the Insane, Marion, has been placed in charge of the construction of the state epileptic hospital, Lynchburg, for which an appropriation of $60,000 was made by the last legislature.——Dr. George E. Wiley has succeeded Dr. William R. Rogers, resigned, as city physician of Bristol.——Dr. James C. Bardin, Charlottesville, has accepted the chair of Portuguese in the department of romance languages in the University of Virginia. He will sail for Brazil June 5.

WASHINGTON

Antituberculosis League Formed.—Whatcom County Antituberculosis League was organized at Bellingham, April 28. Dr. Edward C. Ruge was elected president, and Drs. Orville E. Beebe, Everson, and Spencer S. Howe, Lynden, were elected directors.

Personal.—Dr. Charles L. Dixon has been appointed health officer of Renton.——Dr. Grant Calhoun has been appointed chief of the surgical staff, and Dr. Samuel J. Holmes chief of the medical staff of the Seattle City Hospital.——Dr. Elmer M. Brown has been appointed health commissioner of Tacoma.

Building for Antituberculosis League.—A building is to be erected by Mr. Horace C. Henry, Seattle, recently elected president of King County Antituberculosis League, for the use of the organization. The building will contain a reception room, retiring rooms, an office and general committee rooms. Mr.

Dr. Robert Field Library

Henry has also given forty acres of land north of Seattle for a site for a sanatorium, and has made an unconditional promise to build a sanatorium on this site at an expense of from $25,000 to $30,000.

WEST VIRGINIA

Medical Society Library.—The Ohio County Medical Society, Wheeling, has removed its medical library from the city hospital to its leased rooms on the sixth floor of the new Board of Trade Building.

Will Build Sanatorium.—The Ohio County Antituberculosis League, at a meeting recently held in Wheeling, decided to erect a sanatorium to be known as the Hospital for Curable Tuberculosis. The institution will be incorporated with a capital of $50,000. Decision as to the site has not yet been made.

Society Election.—Monongahela County Medical Society, at its annual meeting, held in Morgantown, April 12, elected Dr. Richard H. Edmondson, president; Dr. John N. Simpson, vice-president; Dr. Francisco T. Haught, secretary; Dr. William C. Moser, treasurer, and Dr. Robert W. Fisher, delegate to the state association, all of Morgantown.

WISCONSIN

New Health Commissioner for Milwaukee.—Dr. William Colby Rucker, of the United States Public Health and Marine-Hospital Service, has been granted a leave of absence for one year to accept the position of health commissioner of Milwaukee.

Personal.—Dr. William H. Brown, Madison, has been made assistant professor of pathology in the University of Wisconsin, Madison, and Dr. W. J. Week, assistant professor of physiology.——Dr. George E. Thompson has succeeded Dr. F. B. Lansdowne as city physician of Kenosha.——The Madison General Hospital has appointed a medical staff with three divisions. The medical division is in charge of Dr. Louis R. Head; the surgical division is in charge of Dr. Reginald H. Jackson, and the laboratory division in charge of Dr. Charles H. Bunting.——Drs. George W. Nott and Frank W. Pope have declined to serve as members of the Racine Board of Health.——Dr. J. B. Richards has been appointed health officer of Janesville.——At the annual election of the Kappa Chapter of the Alpha Kappa Kappa Medical Fraternity in Milwaukee recently, Dr. Daniel Hopkinson was elected primarius, and Dr. Fred C. Leifert, corresponding secretary.

GENERAL NEWS AND COMMENT

Meeting of Climatologists.—At the twenty-seventh annual meeting of the American Climatological Association, held in Washington, May 3-5, the following officers were elected: Dr. John Winters Brannan, New York City, president; Drs. Will Howard Swan, Colorado Springs, and John H. Lowman, Cleveland, vice-presidents; and Dr. Guy Hinsdale, Hot Springs, Va., secretary-treasurer. The next meeting will be held in Montreal in June, 1911.

Instructors in Children's Diseases to Meet.—The fourth annual meeting of the Association of Teachers of Diseases of Children will be held at the Southern Hotel, St. Louis, June 6, under the presidency of Dr. Alfred C. Cotton, Chicago. The morning session will be devoted to business, the reports of committees, and a symposium on the teaching of pediatrics. At the afternoon session, a discussion of the papers read at the symposium will take place and papers will be read, and interesting cases will be presented by the St. Louis members of the association.

Medical Museum Directors Meeting.—At the annual meeting of the International Association of Medical Museums, held in Washington, May 3 and 4, the following officers were elected: President, Dr. Alfred S. Warthin, University of Michigan, Ann Arbor; vice-presidents, Prof. G. Sims Woodhead, Cambridge, Eng.; Dr. Edmond Souchon, New Orleans, and Prof. Ludvig Aschoff, Freiburg, Germany; secretary-treasurer, Dr. Maude E. Abbott, McGill University, Montreal; assistant secretary, Dr. H. W. Francis, McGill University, Montreal; and councilors, Drs. William G. MacCallum, Columbia University, New York City; Edwin R. LeCount, University of Chicago; Frank F. Wesbrook, University of Minnesota, Minneapolis; Daniel S. Lamb, Army Medical Museum, Washington; O. S. Woolley, University of Cincinnati; William Ophuls, San Francisco, and George H. Whipple, Baltimore.

Experts in Tropical Medicine to Meet.—The American Society of Tropical Medicine will hold its seventh annual meeting at the Medical School of St. Louis University, June 11, under the presidency of Col. William C. Gorgas, Medical Corps U. S. Army, Ancon, C. Z. The general discussion of hemoglobinuric fever will be opened by Dr. Allen J. Smith, Philadelphia, after the reading of papers by Drs. Charles F. Craig, Washington; George H. Whipple, Baltimore; William H. Deadrick, Helena, Ark.; Walter Brem, Cristobal, C. Z., and James Ewing, New York City. Among other interesting topics for papers and discussions will be filariasis, elephantiasis, uncinariasis, intestinal amebiasis, hookworm, and pellagra.

Adulterated Macaroni Seized and Condemned.—After a trial in the United States District Court at Chicago before Judge Landis May 16, five car-loads of macaroni manufactured by Chicago and St. Louis firms, which had been seized on account of adulteration under the Food and Drugs Act, were condemned and ordered destroyed. The testimony of the government expert chemists, including Dr. H. W. Wiley, showed that the macaroni had been colored by a coal tar dye known as Martius yellow, made by the action of nitric acid on [illegible] and which has been pronounced poisonous [illegible] ities. Prof. Albert Matthews of the physiologic laboratory of Chicago University, by experiments on frogs, guinea-pigs and dogs with some of the drug obtained from this macaroni. found that it was deadly in small quantities. The defense claimed, but did not attempt to show by witnesses, that the dye was purchased from a firm who guaranteed to them that it was not poisonous and that it was one of the coloring matters permitted by the regulations of the Department of Agriculture.

The Gnat the Conveyor of Pellagra?—A press dispatch from London reports that Dr. Sambon announces from Rome that pellagra has been found to be caused by the bite of a species of midge or black fly and that it thus falls into the class of tropical or semitropical diseases of insect conveyance. Dr. L. W. Sambon, lecturer at the London School of Tropical Diseases and the Royal Institute of Public Health, London, is at present a member of the field committee investigating pellagra in Italy. If this announcement is verified it affords a possible explanation of the sudden occurrence of pellagra in this country, or at least its more general recognition in recent years. It has been a puzzle to some American alienists why they did not see such cases before. Some of them at least were more or less familiar with the disease from descriptions in Italian and other foreign literature and must have been on the lookout for it in the asylum population of the corn-raising districts. The assumption has been made by some students of the recent outbreaks that cases have existed unrecognized for a number of years in such parts of the country. This may be true but it is hard to see how so marked a disorder could have passed unnoticed, at least in its typical form. for any length of time. Dr. Sambon's announcement opens up a new lead for American investigators of the subject.

New Medical Buildings at the University of Minnesota.—It is reported that work has already been started at the University of Minnesota toward the erection on the new extension of the university campus of certain buildings which will constitute the new medical group. The buildings for which funds are available are the Elliott Hospital, Millard Hall and the Institute of Anatomy. The construction of the hospital has been already begun and it is expected that work on the other two buildings will follow within the next few weeks. The hospital will provide for 130 free beds, which will be available solely for patients from all over the state without financial resources. All the clinical material will be used for teaching purposes. The building will be of strictly modern construction and will cost $165,000, exclusive of equipment. Of this sum, $125,000 came from Mr. Walter J. Trask through a bequest from the late Dr. A. F. Elliott and $40,000 was appropriated by the last state legislature. Each of the other buildings is planned ultimately to cost $400,000, but only half of each will be completed at this time. The new Millard Hall will be occupied by the offices of the dean and secretary of the faculty, by record, faculty and committee rooms, and by the several laboratories and offices of the departments of medicine, surgery, obstetrics, physiology and pharmacology. The Institute of Anatomy will contain the laboratories of anatomy, histology and embryology and provide also for laboratories in operative and experimental surgery and surgical anatomy. These buildings will not only provide a hospital and the much needed larger quarters for the college of medicine, but they will constitute the begininning of a complete and compact group of strictly modern medical buildings. The erection of these new buildings is another step in the remarkable progress made during the past few years in medical education in Minnesota.

Discuss Measures for Epileptics.—The ninth annual meeting of the National Association for the Study of Epileptics was held in Baltimore, May 7. Dr. Arthur P. Herring, Baltimore, discussed the situation in Maryland, showing that a very large class of epileptics existed for whom under present conditions no adequate provision was made, and advocating special institutions for epileptics. Mr. Franklin Kirkbride, New York City, told about Letchworth Village now the new institution at West Haverstraw. The scope of the institution appears to be rather for the lower mental grades and feeble-minded rather than for the better class of epileptics. Reports from the various state institutions showed that Ohio had 1,412 in its state institution; New York, 1,339; Massachusetts, 900; Kansas, about 400; Texas, 375; New Jersey, 312; Pennsylvania, 138; Missouri, 108; and Indiana about 100. Connecticut and Virginia have established epileptic colonies, and in a few other states there are divisions in other institutions especially for epileptic classes. The president's address was on "The Utility of Organization." He urged that the efforts of the association should be to unite lofty ideals, common sense, well-directed energy, and well-organized effort, as these are the essentials to bring fruition. The following officers were elected: President, Dr. Middleton M. Perry, Parsons, Kan.; vice-presidents, Dr. William T. Shanahan, Sonyea, N. Y., and Charles H. Grasty, Baltimore; secretary-treasurer, Dr. James F. Munson, Sonyea, N. Y.; and editor of the transactions, Dr. William P. Spratling, Baltimore. On all sides, the necessity of more careful study of individual epilepsy was advocated. The time has passed when an individual who has "fits" is called at once an epileptic, and is consigned to the incurable class. It was emphasized that a most careful study of every case, by every method and from every standpoint is necessary since it is becoming more clearly understood that we have to deal not with "epilepsy" but with "epilepsies." Diverse factors in the individual cases must be discovered.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 30, 1910.

Prevalence of Adenoids

Adenoids are exceedingly prevalent in the children of Great Britain and their interference with education constitutes a problem in the schools. Mr. Macleod Yearsley of the Royal Ear Hospital has concluded an investigation into the occurrence of adenoids in three of the London elementary schools. He finds that about 37 per cent. of the children have adenoids and that between 72 and 76 per cent. of these have also enlarged tonsils. On an average 31.2 per cent. of these children are mouth-breathers, complete or partial, but hypertrophy of the faucial tonsils may give rise to mouth breathing in the absence of adenoids. Sex appears to have no influence on the incidence of adenoids, and they are most common about the age of 8 and next about the age of 12. True aprosexia occurs in about 4.7 per cent. of adenoid cases and is more frequent in girls and is associated with a marked degree of adenoids. Aprosexia is often confounded with dulness due to defective hearing. The so-called adenoid facies is uncommon except in association with a marked degree of adenoids. The association of an abnormally high palate with adenoids is rather due to peculiarities of cranial formation than to extrauterine influences of nasal stenosis, and if there is any relation between a high, narrow palate and adenoids it is possible that the palate shape is rather a cause of adenoids than *vice versa*. The presence of adenoids has more to do with the presence of carious teeth than have mouth-breathing and palate shape, and this is probably due to the increased tendency to oral sepsis in children with adenoids. Irregularity of the upper incisors is less a result of adenoids than palate shape. The percentage of ear complications in adenoid children is about 10.8 and adenoids are probably by far the most important factor in the etiology of ear diseases in childhood.

Scotland's Low Birth-Rate

The low birth-rate of England has from time to time been a subject in previous letters to THE JOURNAL. The fifty-fifth annual report on births, deaths and marriages in Scotland shows that a similar decline has taken place in that country. For 1909, the birth-rate is 26.3 per thousand, the marriage-rate 6.17, and the death-rate 15.2. All these rates are the lowest recorded in the 55 years covered by the registrar-general's returns. The marriage-rate is 0.14 less than the previous lowest record which occurred in 1886. The death-rate is 0.64 less than that of 1905, previously the lowest recorded. The Vaccination Act of 1907, which made a conscientious objection of parents to vaccination a valid excuse for non-vaccination is producing similar evil effect to that in England (previously described in THE JOURNAL). The number of children unvaccinated is now 20,000 more than before the passing of the act.

Plague in India

The Indian plague returns for the week ending March 19 show a great increase of the number of cases in mortality in the Punjab in which the number is 10,787. The number for the whole of India is 27,642. The incidence of the disease from year to year varies in a very irregular fashion. Thus in 1905 the number of deaths was 126,000; in 1906 the number dropped to less than half of this; but in 1907 it again rose to 83,600. In 1908-09 the disease died down except in few localities and the number of deaths was less than 16,000. Inoculation against plague is still regarded with great distrust by the natives and not more than 5,000 or 6,000 submit themselves annually to prophylactic inoculation.

Hospital Bed Endowed by the Emperor of Japan

At the Seamen's Hospital, Greenwich, the Japanese ambassador unveiled a tablet over a bed which had been endowed by the Emperor of Japan. He expressed the emperor's gratitude that such an institution as the Seamen's Hospital existed where so much care and attention were bestowed on Japanese seamen admitted to its wards.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 6, 1910.

Conference for the Welfare of the Blind

A conference for the welfare of the blind, organized by the cooperation of the Syndicat général des oculistes français, the Institution nationale des jeunes aveugles, the Hospice national des Quinze-Vingts, the Association Valentin-Haüy, etc., has just been held in Paris. M. Mirman, director of the public charities and hygiene, presented to the conference a report on the law of 1905 and relief for the blind. He proposed certain resolutions demanding especially that a campaign of propaganda be undertaken by means of circulars, pamphlets and the public press, to induce the municipal councils to grant assistance to every young blind person who is capable of being professionally educated—this assistance not to take the form of a monthly allowance, but of maintenance at a special professional school, or, in default of such school, with a person who should undertake to teach a trade to the blind pupil; that in each important center private initiative should found a residential institution, where in exchange for an amount equal to the monthly allowance which the blind receive in accordance with the law of 1905, blind persons capable of working or those whose wives and daughters are compelled to work outside, might be lodged and cared for under good hygienic conditions. Dr. Valude, physician of the ophthalmologic clinic of the Hospice des Quinze-Vingts, took up the especially interesting question of blindness caused by ophthalmia neonatorum and the means of combating it. He spoke of the circular that M. Clemenceau addressed last year to the prefects on this subject (THE JOURNAL, May 22, 1909, lii, 1676). Dr. Valude advocates making the Credé method of using nitrate of silver immediately after the birth of a child, an important compulsory part in the instruction of midwives. He also recommends that midwives be obliged, under penalty, not only to declare confirmed ophthalmia, but to have it immediately cared for by a physician; and that the public be informed of the dangers of ophthalmia by concise information distributed to parents, by notices posted up in the mayors' offices and in schools, by lectures given in neighborhoods where working people live; and that medical students be compelled to pass examinations on the elementary questions of ophthalmology.

Zambaco Pasha Prize

Dr. Zambaco Pasha of Constantinople, associate member of the Académie de Médecine and corresponding member of the Académie des Sciences, has just endowed the Société de médecine et d'hygiène tropicales with three prizes, one of $200 (1,000 francs) and two of $100 (500 francs) for the three best memoirs on the question of the contagiousness of leprosy. The works are to be the result of personal research and of scientific observations made at first hand. The commission which is to award the prizes has just decided that the candidates shall discuss the following questions: 1. Is leprosy hereditary? 2. Is leprosy contagious among human beings? 3. Is leprosy transmissible to animals? If there is occasion, means of control, such as microscopic preparations and photographs, should be appended to the memoirs. The papers should be written in French, should be addressed to the Secrétaire général de la société de médecine et d'hygiène tropicales at 18 rue de Grenelle, Paris, and should reach him before April 1, 1911.

Franco-Belgian Convention for the Declaration of Epidemic Diseases

The French and Belgian governments, by a series of agreements concluded since 1895, the last of which was signed recently, have decided on reciprocal notification of epidemic diseases by the authorities in the frontier zones. The diseases which affect human beings which are to be reported in these regions are Asiatic cholera, bubonic plague, typhus, typhoid fever, smallpox, scarlatina, diphtheria, measles, dysentery, contagious ophthalmia, puerperal fever, cerebrospinal meningitis and all epidemic and transmissible diseases. The diseases affecting animals which are to be reported are contagious typhus, contagious pleuropneumonia, aphthous stomatitis, glanders, farcy, sheep-rot, scabies and swine plague. Notification is to be given on the appearance of the first cases, whether confirmed or suspected.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, April 28, 1910.

Bill to Regulate Compulsory Insurance

The bill modifying the present legislation on compulsory insurance of wage-earners is having its first reading in the Reichstag (every bill must be considered three times in the parliament). It appears that the various parties are more favorable to the wishes of the medical profession than was to be expected. The repeated communications of physicians have plainly not been without effect on the legislators, and especially influential in this line was the extraordinary meeting of the medical association, the Aerztetag, April 17 in Berlin, at which about 24,000 physicians were represented by delegates. With a few exceptions the delegates were unanimous in the opinion that the new bill, in spite of some important improvements, is not calculated to secure the harmony in the Krankenkassen relations which is desirable in the interests of the social legislation and the economic interests of the medical profession, and that the demands voted at the regular Aerztetag, at Lübeck, must be maintained. Especially the free choice of physician must be legally guaranteed. In fact, at the recent discussions in the Reichstag, a representative of the social democratic party announced himself as an adherent to the principle of the free choice of physician, and thus it is to be hoped that this party, which includes the principal opponents in the Krankenkassen to the demands of the medical profession, will vote favorably to these demands. The government has indeed made provision for the management of the medical affairs of the Krankenkassen in both ways, by the so-called fixed physicians and by free choice. However, it will without doubt yield if the Reichstag votes differently. Possibly the government was favorably influenced by the petition presented by the medical faculties of practically all the German universities on the suggestion of the editor of the *Deutsche medizinische Wochenschrift*. In this petition 150 professors supported the demands of the practitioners for the improvement of the imperial insurance law and distinctly called attention to the dangers which threaten the independence of the medical profession if the bill in its present form shall be enacted into law.

Centennial of the Berlin Medical University Policlinic

On May 2 our university policlinic for internal medicine will celebrate its centennial. It was founded by Hufeland, who delivered the first lecture in it. His successor in 1833 was his son-in-law, Professor Osann, who was a teacher of pharmacology in the university. Then followed, in 1842, the renowned neurologist, Professor Romberg (the discoverer of the so-called Romberg sign in tabes). He was followed, in 1865, by the distinguished psychiatrist, Professor Greisinger, who continued in office only two years because he was too much in demand at the newly-founded clinic for mental and nervous diseases at the Charité. Prof. J. Mayer, who was not distinguished in science but a good practitioner and teacher, succeeded him. After the death of Mayer, in 1887, Professor Senator became the director of the institute, and has retained this post for twenty-three years, but resigns now with the end of the summer semester. Although in the early years on the average only 700 patients were treated in the policlinic, their number of late years has risen to 10,000. In the beginning the patients were treated not only in the clinic but also by assistants and students in their own homes, but for a number of years this part of the policlinic work, so important for instruction, has been discontinued on account of lack of room. The number of students attending the policlinic is still relatively large, as Professor Senator, in spite of his advanced age, shows still a remarkable activity in teaching. No decision has been made as to his successor.

Pharmacology

[Contributions from the Chemical Laboratory of the American Medical Association.]

NOITOL AND ANADOL

W. A. Puckner and L. E. Warren

NOITOL

The Journal received an inquiry concerning the composition of Noitol, a preparation which is being advertised to the medical profession as a "specific" for the cure of eczema and certain other cutaneous diseases. The preparation is manufactured by the Wheeler Chemical Works, Chicago. Trade packages of Noitol were purchased and examined in the Association laboratory. On the label of the package, Noitol—an inversion of the word "lotion"—is described as follows:

> NOITOL
> (Dr. Bradbury's Eczema Lotion.)
> For External Application Only!
> Our Most Popular Specialty.
>
> A specific for the cure of Eczema, Scrofulous and Syphilitic Eruptions, Lupus, Salt Rheum, Tetter, Itch. This remedy is composed of valuable Oils, combined with Vegetable and Mineral Acids in such proportions as cause a rapid and permanent cure of the above complaints.

Noitol is a clear, nearly colorless, acid solution, the greater portion of which is water. Its specific gravity is 1.0097 at 25 C.

Qualitative tests demonstrated the presence of a chlorid, a nitrate, a mercuric salt, free acid and glycerin. No "oils" or "vegetable acids" could be found.

The analysis[1] of the preparation indicated that its composition is essentially as follows:

Mercuric Chlorid	0.0463 gm. in 100 c.c.
Mercuric Nitrate	0.0450 gm. in 100 c.c.
Glycerin	1.3021 gm. in 100 c.c.
Nitric Acid	1.0265 gm. in 100 c.c.
Water (by difference.)...........	98.5545 gm. in 100 c.c.

From the above it appears that Noitol is simply a weak, acid solution of mercury salts—the total being approximately equivalent to a 1 to 1,000 bichlorid of mercury solution—exploited under a meaningless name. It is but one more example of the old, old story of a well-known remedy being sold at a high price under a name which is in no way indicative of its composition, and under claims which are absurdly false.

The price of the mixture is $2.00 a pint; the estimated cost, exclusive of the container, is about 6 cents a gallon, or, put another way: the price of a pint bottle, it is estimated, would make a barrel (31 gallons) of the nostrum. The incorrect statement made concerning its components, the unwarranted therapeutic claims made for it, and the exorbitant price easily place Noitol in the front rank among the "patent medicine" frauds. *Yet it is advertised to physicians as an ethical proprietary* and is evidently being prescribed by them.

ANADOL

In the circular matter accompanying the trade package of the preparation, "Noitol," described above, a preparation called "Anadol" is described. Anadol is claimed to be an analgesic and antipyretic. In the descriptive circular there is no information concerning the composition of the preparation but from the general therapeutic description the physician might easily be led to believe that "Anadol" is a distinct chemical substance.

To reduce temperature the physician is advised to push the administration of Anadol in 10 grain doses until the febrile condition is under control or until a maximum of 70 grains of the preparation has been ingested. The circular further states:

> ". . . in this lies the special value of ANADOL; there are no annoying by-effects; the stomach bears the remedy well and neither circulation, respiration, nor the nerve centers show the least disturbance."

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[1] The details of the analysis will be sent on receipt of a stamped, addressed envelope; they will also be published in the annual report of the Chemical Laboratory.

As no evidence could be obtained concerning the composition of Anadol and, as the preparation is being brought to the attention of physicians by means of circulars in connection with the distribution of Noitol, it seemed worth while to take up its examination in the Association laboratory. Accordingly a trade package of the material which had passed into interstate commerce was purchased.

Qualitative tests demonstrated the presence of sodium, a carbonate, caffein and acetanilid, the latter in considerable quantities. Analysis[2] indicated that the composition of the specimen examined is essentially as follows:

Acetanilid	79 per cent.
Caffein	1 per cent.
Sodium bicarbonate	20 per cent.

Since, according to the circular, it is permissible to prescribe 70 grains of this preparation within 2½ hours, a patient thus treated would receive no less than 55 grains of acetanilid! In view of the numerous cases of poisoning due to the misuse of acetanilid ("The Harmful Effects of Acetanilid, Antipyrin and Phenacetin," U. S. Dept. Agric., Bur. Chem., Bull. No. 126) the physician should be apprised of the composition of Anadol.

Editorial Note: The chemical investigations reported above emphasize once more the need of such an institution as the Association's laboratory and again demonstrate the value of its work. At first sight it seems disheartening to find that physicians are so easily humbugged. Yet when it is remembered that it is impracticable for physicians either to analyze such products themselves or to go to the expense of having chemists do it for them, it is evident that the fault lies not so much with the physician as with the conditions that makes the exploitations of such frauds possible. It is on the public that the burden ultimately falls, for it is the layman who has to pay two dollars for a few cents worth of medicine. But—and this is far more serious—that the physician should be urged to dose his patient with an insidiously dangerous drug to a point far beyond the limits of safety, is little less than criminal. Yet so long as unknown medicinal products are prescribed just so long will this danger be a very real one.

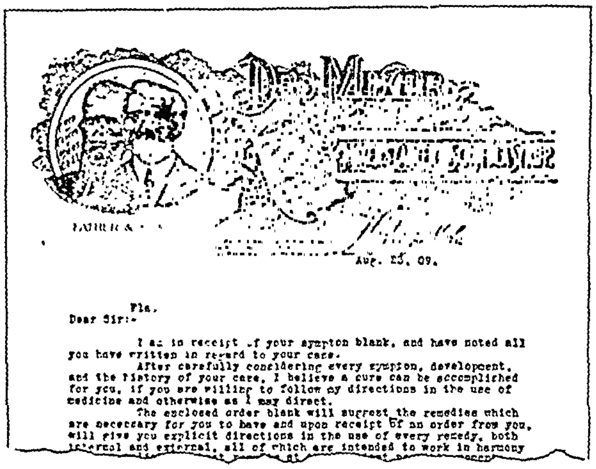
DRS. MIXER

Another Cancer Cure Concern Declared Fraudulent by the Postoffice Authorities

[The postal authorities have done the public great service during the past year or two in declaring fraudulent and denying the use of the United States mails to a number of "cancer cure" concerns. The facts brought out by the federal investigations have appeared in abstract form in the pages of The Journal and more complete accounts have been published as pamphlets. The following case is one of the latest in which a fraud-order was issued. It will appear in more extended form as a pamphlet.]

Drs. Mixer was the name under which C. W. Mixer of Hastings, Mich., conducted a mail-order "cancer cure" concern. There were no Drs. Mixer, C. W. Mixer being neither a graduate in medicine nor licensed to practice medicine. His methods differed but little from those of similar concerns. About the only variation from the stereotyped claims and ways of the "cancer cure" fraternity was in the representation that C. W. Mixer's father (who, by the way, had been dead many years) had a cancer that the "best physicians in America" could not cure. He—Mixer, senior—then "discovered the great remedy that cured him," and, of course, the same "remedy" was the one now sold by Drs. Mixer.

In other respects the methods of this concern did not differ from those of the other "cancer cure" frauds which have been exposed. The claims were equally extravagant and the system of follow-up letters in no wise original. The "remedy" was claimed to have cured 86 per cent. of those who had taken it and equal success was said to have attended the treatment of either internal or external cancer. The usual symptom blank was to be filled out by the victim and on payment of the required fee a batch of medicines would be sent.



Aug. 23, 09.

Fla.
Dear Sir:-

I am in receipt of your symptom blank, and have noted all you have written in regard to your case.

After carefully considering every symptom, development, and the history of your case, I believe a cure can be accomplished for you, if you are willing to follow my directions in the use of medicine and otherwise as I may direct.

The enclosed order blank will suggest the remedies which are necessary for you to have and upon receipt of an order from you, will give you explicit directions in the use of every remedy, both internal and external, all of which are intended to work in harmony

Photographic reproduction of part of the circular letter which the victims received after sending in the "symptom blank."

Dr. F. P. Morgan of the Department of Agriculture opened correspondence with Drs. Mixer under an assumed name and on filling out a symptom blank he was told that the case described was one of cancer. Mixer perceived "no reason why you can not be cured" and on the receipt of $11.80 sent the "treatment" which consisted of seven medicines. These nostrums were analyzed in the government laboratories and were found to be composed, respectively, as follows:

1. "Mixer's Cancer and Scrofula Syrup": A syrup containing potassium iodid, 6 per cent., alcohol and a small amount of vegetable ingredient similar to sarsaparilla flavored with methyl salicylate.
2. "No. 1 Wash": Solution of hydrogen peroxid.
3. "No. 1 Alterative": A mixture of alcohol and water containing a large amount of glycerin and a small amount of what appeared to be gentian.
4. "Cancer Reducer": A strong alcoholic solution of camphoraceous oils, with considerable glycerin.
5. "Cancer Paste": Vaselin (petrolatum) containing a large amount of ground flaxseed and some camphoraceous substance with what appeared to be hyoscyamus.
6. "Cancer Salve": A mixture of vaselin (petrolatum) and lanolin (wool-fat) with powdered opium and tannin.
7. "Cleansoine Soap Powder": Powdered soap containing borax and thymol.

In the advertising matter sent out by Mixer every effort was made to impress prospective victims with the idea that the concern was conducted by physicians. Nor was this the only element of fraud. Part of the "literature" contained a reprint of an article entitled "Palliatives and Curatives in the Treatment of Cancer and Scrofula," by C. H. Brown, M.D., from the *American Journal of Health.* This was prefaced with the statement: "The following is reprinted from one of the leading journals of the country." As a matter of fact, the *American Journal of Health* was not a "leadindg journal" but a fraudulent publication, printed to sell laudatory notices to mail-order medical concerns. These concerns then used such notices as being the indorsement of a medical publication. At the hearing Mixer admitted that he paid five or ten dollars—he could not recall the exact amount—for the article.

The usual defense was offered—testimonials. There was no satisfactory evidence adduced to show that the individuals claiming to have been cured of cancer by the Drs. Mixer treatment ever had cancer. As the assistant attorney-general said in recommending that a fraud-order be issued: "It is to be expected that out of the multitude of cases that this advertiser treats each year there should be a certain number of instances in which persons do not have cancer at all but are afflicted with some non-malignant sores which are amenable to treatment [Especially to treatment with potassium iodid, which Mixer used!—ED.] and which in some instances do yield to treatment." After hearing all the evidence against Mixer as well as the defence offered by his attorney, together with some remarks in behalf of the "cancer curer" by the congressman from his district—E. L. Hamilton—the assistant attorney general reported: "I find that this is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and I therefore recommend that a fraud order be issued against Drs. Mixer." And it was issued.

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[2] The details of the analyses will be sent on receipt of a stamped self-addressed envelope.

REPORT OF PHARMACOPEIAL CONVENTION

Held in Washington, D. C., May 10-13, 1910

While the medical profession was not so well represented at this convention as it should have been, nevertheless there were more medical men in attendance than at the last convention. As is well known, the main business of the convention is to provide for the revision of the Pharmacopeia and the principal part of this is the election of the revision committee. Heretofore, the revision committee has consisted of twenty-five, but this number was considered too large for practical work and too small to be representative. A radical change was made in that the committee of revision was enlarged to fifty; this large committee selects from its number fifteen who are to be known as the executive revision committee. While the whole committee of fifty has general supervisory functions the smaller committee will be responsible for the work.

It will be noted that the medical men on the revision committee are in an extreme minority, only three or four practicing physicians being in the list. While this is true, the medical profession is much better represented than heretofore for the reason that a considerable number of the revision committee represent medical interests and the medical profession. The Council on Pharmacy and Chemistry is well represented, having eight of its members on the committee of revision.

Officers Elected

A decided compliment was paid Dr. H. W. Wiley by the convention when it selected him as its president. The following officers were elected: President, Dr. H. W. Wiley, Washington, D. C.; first vice-president, Dr. N. S. Davis, Chicago; second vice-president, Prof. Charles Caspari, Jr., Baltimore; third vice-president, Dr. Oliver T. Osborne, New Haven, Conn.; fourth vice-president, Mr. Leo Eliel, South Bend, Ind.; fifth vice-president, Dr. W. A. Bastedo, New York; secretary, Dr. M. G. Motter, Washington, D. C.; assistant secretary, Dr. Noble P. Barnes, Washington, D. C.; treasurer, Mr. S. L. Hilton, Washington, D. C.

GENERAL COMMITTEE OF REVISION

Alpers, William C., Retail Druggist, New York.
Anderson, John F., Director, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Arny, Harry V., Professor of Theory and Practice of Pharmacy, Cleveland School of Pharmacy.
Bartley, Elias H., Professor of Chemistry, Toxicology and Pediatrics, Long Island College Hospital, Brooklyn, N. Y.
Beringer, George M., Retail Druggist, Camden, N. J.
Bodemann, Wilhelm, Retail Druggist, Chicago.
Caspari, Charles, Jr., Professor of Theory and Practice of Pharmacy, University of Maryland, Department of Pharmacy.
Caspari, Charles E., Professor of Chemistry, St. Louis College of Pharmacy.
Coblentz, Virgil, Professor of Chemistry, College of Pharmacy of the City of New York.
Davis, Nathan S., Professor of Principles and Practice of Medicine and Clinical Medicine, Northwestern University Medical School.
Diehl, C. Lewis, Professor of Practical Pharmacy, Louisville College of Pharmacy.
Diekman, George C., Professor of Theory and Practice of Pharmacy, College of Pharmacy of the City of New York.
Dohme, Alfred R. L., Chemist, Sharp & Dohme, Baltimore, Md.
Eberle, Eugene G., Editor, The Southern Pharmaceutical Journal, Dallas, Tex.
Edmunds, Charles Wallis, Professor of Therapeutics and Materia Medica, University of Michigan, Department of Medicine and Surgery.
England, Joseph W., Director Scientific Department, Smith, Kline & French Company, Philadelphia.
Francis, John M., Chemist, Parke, Davis & Company, Detroit.
Good, James M., Professor of Theory and Practice of Pharmacy, St. Louis College of Pharmacy.
Gordin, Harry M., Professor of Chemistry, Northwestern University, Department of Pharmacy.
Gregory, Willis G., Buffalo College of Pharmacy.
Haines, Walter S., Professor of Chemistry, Materia Medica and Toxicology, Rush Medical College, Chicago.
Hallberg, Carl S. N., Professor of Theory and Practice of Pharmacy, University of Illinois, School of Pharmacy.
Hatcher, Robert A., Professor of Pharmacology, Cornell University, Medical Department, New York.
Hopp, Lewis C., Retail Druggist, Cleveland.
Hunt, Reid, Chief, Division of Pharmacology, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Kebler, Lyman F., Chief of Drug Laboratory, Bureau of Chemistry, U. S. Department of Agriculture.
Koch, Julius A., Professor of Chemistry, University of Pittsburgh, Department of Pharmacy.
Kraemer, Henry, Professor of Botany and Pharmacognosy, Philadelphia College of Pharmacy.
Kremers, Edward, Professor of Chemistry, University of Wisconsin, School of Pharmacy.
LaWall, Charles H.; Associate Professor of Theory and Practice of Pharmacy, Philadelphia College of Pharmacy.
Long, John H., Professor of Chemistry, Northwestern University Medical School, Chicago.
Lyons, Albert B., Chemist, Nelson, Baker & Company, Detroit.
Marvel, Philip, Physician, Atlantic City, N. J.
Nixon, Charles F., Retail Druggist, Leominster, Mass.
Osborne, Oliver T., Professor of Therapeutics and Materia Medica, Yale Medical School.
Plaut, Albert, Wholesale Druggist (Lehn & Fink), New York.
Puckner, W. A., Director of Chemical Laboratory, American Medical Association, Chicago.
Raubenheimer, Otto, Retail Druggist, Brooklyn, N. Y.
Remington, Joseph P., Professor of Theory and Practice of Pharmacy, Philadelphia College of Pharmacy.
Rosengarten, George D., Chemist, Powers-Weightman-Rosengarten Company, Philadelphia.
Rusby, Henry H., Professor of Botany and Materia Medica, College of Pharmacy of the City of New York.
Sadtler, Samuel P., Professor of Chemistry, Philadelphia College of Pharmacy.
Sayre, Lucius E., Professor of Materia Medica, University of Kansas, School of Pharmacy.
Schlotterbeck, Julius O., Professor of Pharmacognosy and Materia Medica, University of Michigan, School of Pharmacy.
Sollmann, Torald, Professor of Pharmacy and Materia Medica, Western Reserve University Medical Department.
Stevens, A. B., Professor of Theory and Practice of Pharmacy, University of Michigan, School of Pharmacy.
True, Rodney H., Physiologist, Bureau of Plant Industry, U. S. Department of Agriculture.
Vanderkleed, Charles E., Chemist, H. K. Mulford Company, Philadelphia.
Wilbert, M. I., Assistant Pharmacologist, Hygienic Laboratory, United States Public Health and Marine-Hospital Service.
Wood, Horatio C., Jr., Associate Professor of Pharmacology, University of Pennsylvania.

Correspondence

A Medical Play by a Medical Man at a Medical Society Meeting

To the Editor:—Dr. Dan Millikin is not only an honored practitioner, having been president of the Ohio State Medical Society in 1895 and being a descendant of a long line of physicians, himself and son Dr. Mark Millikin representing respectively the fourth and fifth generations practicing in their native city, but he is also a playwright and actor of local and state fame. At the meeting of the Ohio State Medical Society in Toledo, May 11, an audience of 800 physicians and their wives greeted Dr. Millikin and his talented company from Hamilton in a way that left no doubt about the attractiveness of this particular play, and the merits of this style of entertainment of medical men. The medical comedy entitled "What Would Mrs. MacThinkar say?" is brilliant and clever and the players showed talent and excellent training.

But it is not to call attention to this play or to the artists in particular but rather to comment on entertainments that this letter is written. We should break away from the conventional vaudeville and punch affairs and cultivate a line of amusements that have characteristic, and educational qualities. Professional experience is overflowing with material ready for the touch of the playwright, and at the same time, as our experience shows, a medical audience is especially "sensitized" to appreciate the humor and pathos characteristic of a well-presented medical comedy.

THOMAS HUBBARD.

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 14, 1910:

The following named officers of the Medical Corps are detailed as instructors in the subjects specified after their respective names at the school for officers of the Medical Corps of the National Guard of Ohio, to be held in Columbus, Ohio, June 8 and 9, 1910:

Munson, Edward L., major, Camp Sanitation and Medical Organization in the Field.

Reynolds, Charles R., major, Manual, Medical Department, and Field Service Regulations.

Fisher, Henry C., major, Physical Examination of Recruits.

Pipes, Henry F., capt., Papers and Records.

Morgan, Norman D., C. S., reported for duty at Presidio of San Francisco.

Hallett, H. J., 1st lieut., M. R. C., reported for temporary duty at Fort Hamilton, New York.

Pulver, A. L., 1st lieut., M. R. C., reported for temporary duty at Fort Jay, N. Y.

Brownlie, James W., C. S., ordered to proceed from San Francisco, to the Presidio of San Francisco, and report to the commanding officer, detachment of Company M, 3rd Battalion of Engineers, for duty with and to accompany that command to Ataccadero, Cal.

Stephenson, William, lieut. col., ordered to proceed from Fort Leavenworth, Kan., to Fort D. A. Russell, Wyo., for duty with Battery C, 2nd Field Artillery from that post to San Francisco, then return to his station.

Woodall, William P., capt., ordered to Fort D. A. Russell, Wyo., for duty.

Bierbower, H. C., 1st lieut., M. R. C., on expiration of leave of absence ordered to Fort Robinson, Neb., for duty.

Boyer, Perry L., capt., ordered to Fort Mason, Cal., for temporary duty, and for temporary duty as attending surgeon, San Francisco, in addition to his duties at Fort Mason, Cal.

Eastman, William R., capt., on expiration of leave of absence ordered to Fort Mason, Cal., for duty, and attending surgeon at San Francisco.

Keefer, Frank R., lieut. Col., promoted to, with rank from April 14, 1910.

Grubbs, Robert B., major, promoted to, with rank from April 14, 1910.

Ekwurzel, George M., major, on the expiration of his present leave of absence ordered to Fort Mackenzie, Wyo,, for duty.

Brooks, William H., major, ordered to accompany 35th Company Coast Artillery from San Francisco, to Fort Monroe, Va., then return to his proper station.

Delacroix, A. C., 1st lieut., M. R. C., on arrival at San Francisco, ordered to accompany troops to Fort Sill, Okla., on completion of this duty to proceed to Boise Barracks, Idaho, for duty, as heretofore ordered.

Peck, Luke B., 1st lieut., M. R. C., granted leave of absence for 1 month and 10 days.

Miller, Reuben B., capt., granted 15 days' leave of absence.

Mason, D. S., the leave of absence heretofore granted is extended 2 months and 20 days.

Sweazey, Verge E., capt., granted 4 months' leave of absence.

Billingslea, C. C., capt., leave of absence extended 1 month.

Pulver, Arthur L., 1st lieut, M. R. C., relieved from temporary duty at Fort Jay, N. Y., and ordered to Fort Wood, N. Y., for temporary duty.

Little, William L., capt., relieved from temporary duty at Fort Wood, N. Y., and ordered to return to station, Fort Adams, R. I.

Sharpe, Herbert H., 1st lieut., M. R. C., relieved from temporary duty at Fort Adams, R. I., and ordered to return to station, Fort Jay, N. Y.

Tefft, William H., capt., granted leave of absence for 1 month.

Straub, Paul F., major, detailed as a member of the General Staff Corps.

Medical Corps, U. S. Navy

Changes during the week ended May 14, 1910:

Bogan, F. M., surgeon, detached from the *Wisconsin*, and ordered to the *Nebraska*.

Heiner, R. G., P. A. surgeon, detached from the *Independence* and ordered home to wait orders.

Bogan, F. M., surgeon, orders of May 6, detaching from the *Wisconsin* and ordering to the *Nebraska*, revoked.

Cather, D. C., P. A. surgeon, ordered to the Naval Academy.

Kaufman, J. B., asst.-surgeon, ordered to the Navy Yard, Norfolk, Va.

Ely, C. F., P. A. surgeon, detached from the Naval Station, Olongapo, P. I., and ordered to the *Wilmington*.

Higgins, S. L., P. A. surgeon, detached from the *Wilmington* and ordered home.

Higgins, M. E., asst.-surgeon, detached from the *Charleston* and ordered home.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 11, 1910:

Carter, H. R., surgeon, granted 5 days' leave of absence from May 29, 1910.

Carmichael, D. A., surgeon, granted 14 days' leave of absence from May 27, 1910:

Cobb, J. O., surgeon, granted 7 days' leave of absence from May 7, 1910.

Wertenbaker, C. P., surgeon, granted 4 days' leave of absence from May 4, 1910.

Goldberger, Joseph, P. A. surgeon, granted 7 days' leave of absence from April 29, 1910, under paragraph 191, Service Regulations. Granted 14 days' leave of absence from May 6, 1910.

Bahrenburg, L. P. H., P. A. surgeon, granted 14 days' leave of absence from April 22, 1910, on account of sickness.

Rucker, W. C., P. A. surgeon, granted 1 month's leave of absence from May 4, 1910.

Warner, H. J., asst.-surgeon, granted 9 days' leave of absence from May 16, 1910.

Ridlon, J. R., asst.-surgeon, directed to report at Bureau for special temporary duty.

Leake, James P., asst.-surgeon, granted 7 days' leave of absence from April 12, 1910, under paragraph 191, Service Regulations.

Hallett, E. B., acting asst.-surgeon, granted 1 day's leave of absence, May 7, 1910.

Lawhorn, C. C., acting asst.-surgeon, granted 13 days' leave of absence from May 11, 1910.

Onuf, B, acting asst.-surgeon, granted 2 days' extension of leave of absence from April 26, 1910, on account of sickness.

Board of medical officers convened to meet at Montreal, Canada, May 3, 1910, for the purpose of e [illegible] Detail for the board: Passed Assistant Surgeo[illegible] man; Acting Asst.-Surgeon George Mathewson; [illegible] Fred Tooke, recorder.

Board of medical officers convened to meet at the Marine Hospital, San Francisco, May 16, 1910, for the purpose of conducting a physical examination of an officer of the U. S. Revenue-Cutter Service. Detail for the board: Surgeon J. M. Gassaway, chairman; Passed Assistant Surgeon R. E. Ebersole, recorder.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE LOCAL ANESTHETIC EFFECT OF QUININ: A CLAIM OF PRIORITY

To the Editor:—Allow me to state, in answer to the letter of Dr. W. S. Hoy on this subject (The Journal, May 14, 1910, p. 1628) that my experimental work resulting in the discovery of the local anesthetic effect of quinin was done in 1885, more than ten years prior to my published report in 1896. This, I believe, establishes the matter of priority as far as this is shown by any published claims to date. According to Dr. Hoy's statement, Dr. Sylvester began the use of quinin as a local anesthetic endermically (not hypodermically) about twenty-two years ago.

V. M. Griswold, M.D., Fredonia, N. Y.

TRIPLE KIDNEY

To the Editor:—Please let me know how many cases of triple kidney have been reported, when and by whom, and the location of the third kidney.

E. S. Lauzer, Rock Springs, Wyo.

Answer.—This anomaly is very rare and its existence has been doubted by some authors. The following are all the distinct references to cases that we have been able to find.

Beauchêne fils: Description de trois reins réunis trouvés dans le cadavre d'une jeune femme, *Bull. Fac. de méd. de Paris,* 1810, ii, 30.

Renaud: Des reins réunis par une espèce de bande à la forme d' un troisième rein, *Bull. Soc. anat. de Paris,* 1835, x, 2

Supernumerary Kidney, *London Med. Gaz.*, 1838, new series, ii, 127.

Hyrtl: Ein wahrer Ren tertius, *Oester. med. Wchnschr.*, 1841, p. 995.

Amick: Four Kidneys, *Cincinnati Med. Reports,* 1871, iv, 551-554.

Morris: Rep. Surgeon-General Marine-Hospital Service, U. S. A., 1885, p. 148.

Cheyne, W.: *Lancet,* London, 1899, i, 215.

Rep. Supervising Surgeon Marine Hospital, Washington, 1884-5, pp. 148-150.

Jump, R. L.: Supernumerary Kidneys, *Occidental Med. Times,* 1894, viii, 173.

Von Hansemann: Double Kidney, *Berl. klin. Wchnschr.,* 1897, No. 4.

Barlet, J. M.: A Pathologic Curiosity (Supernumerary Kidney), *Lancet,* London, 1904, i, 124.

Calabrese: Rein supernuméraire constaté pendant la vie, *Ann. d. mal. d. org. génito-urin.,* 1908, ii, 1841.

Calabrese: Encore un rein supernuméraire constaté pendant la vie, *Ann. d. mal. d. org. génito-urin.,* 1909, i, 749.

Desnot and Minet: ("Maladies des voies urinaires," p. 1044) say: This anomaly is exceedingly rare. The supernumerary kidney may be fused with the two others, in which case it has been classed as a trilobate kidney.

H. Kümmel says that supernumerary kidneys occur. Four kidneys were present twice; three were found once ("Ergänzungsbuch des Handbuch der praktischen Medizin," Edition 2, 1907; Ebstein, W., and Schwalbe, J.: Chirurgie des praktischen Arztes, p. 602).

As to the location of the third kidney, we find in Rauber-Kopsch "Lehrbuch der Anatomie," Edition 7, Part 4, The Intestines, p. 211, the statement: "The third kidney lies usually in front of the vertebral column or at one side of it or in the pelvis."

Reference may also be made to Rayer: "Maladies des reins," and to Cadoré, F. L.: "Les anomalies congénitales du rein," published by Masson, Lille, 1903, p. 205.

Marriages

Simon Wendkos, M.D., to Miss Sarah Seidman, both of Philadelphia, May 8.

Julian A. Hielscher, M.D., to Helen Hughes, M.D., both of Mankato, Minn., May 2.

Jacob Myers, M.D., Chicago, to Miss Gertrude Myers, of Mount Pulaski, Ill., April 20.

Hayden Lyle Fischer, M.D., Kewanee, Ill., to Miss Georgia Elizabeth Poole, of Chicago, May 18.

Harlow V. Wilson, M.D., to Mrs. Daisy Jones, both of Champaign, Ill., at Chicago, April 30.

Alva V. McCurry, M.D., Baltimore, Md., to Miss Frances Varina Robertson, at Baltimore, January 3.

John G. Bickley, M.D., to Miss Tina M. Stewart, both of Waterloo, Iowa, at Morrelton, Ark., April 29.

Charles Fisher Andrew, M.D., Longmont, Colo., to Mrs. Sadie Whitney, of Denver, at Chicago, recently.

Lucius Warren Johnson, M.D., U. S. Navy, to Miss Margaret Crosby Cranston, of Washington, D. C., May 17.

Deaths

Howard H. Barker, M.D. Georgetown University, Washington, D. C., 1870; a member of the American Medical Association; formerly president of the American Therapeutic Society, Medical Association of the District of Columbia, and Washington Therapeutic Society; professor of obstetrics and gynecology and dean of the Medical Department of Georgetown University; surgeon to the Columbia and Sibley Memorial hospitals, surgeon in charge of diseases of women in the Central Dispensary and Emergency Hospital; and consulting gynecologist to the Eastern Dispensary; died at his home in Washington, May 8, from uremia, aged 61.

James Decker Spencer, M.D. Bellevue Hospital Medical College, 1870; a member of the Medical Society of the State of New York, and president in 1896; formerly president of the Jefferson County Medical Society; a member of the American Public Health Association, and New York Academy of Medicine; local surgeon for the Rome, Watertown and Ogdensburg Railroad; surgeon to the Jefferson County Hospital; and president of the medical board and consulting surgeon to the Watertown City Hospital; died at his home, May 5, from cerebral hemorrhage, aged 60.

George Arnold Bellows, M.D. Detroit Medical College, 1881; a member of the American Medical Association; physician to the Seneca County (N. Y.) Almshouse from 1884 to 1892; health officer of Waterloo from 1882 to 1883; U. S. pension examining surgeon from 1887 to 1895; coroner of Seneca county for several years, and since 1891, a member and secretary of the board of trustees of Waterloo Academy; died at his home in Seneca Falls, May 10, from acute nephritis, aged 53.

Charles S. Martin, M.D. University of Pennsylvania, Philadelphia, 1890; a member of the Medical Society of the State of Pennsylvania; recently appointed postmaster of Allentown; for ten years a member of the board of health; since 1897 a member of the board of trustees of the Allentown Hospital; secretary of the Hospital Association since 1892, and a member of the City Park Commission; died at his home, May 4, from heart disease, following pneumonia, aged 43.

Charles Austin Devendorf, M.D. Bellevue Hospital Medical College, 1866; for many years a practitioner of Detroit; a medical cadet, assistant surgeon and major of the line during the Civil War; professor and emeritus professor in the Detroit College of Medicine; one of the organizers and for several years chief of the medical staff of the Children's Free Hospital; died at his country home near Sandwich, Ont., May 3, from cerebral hemorrhage, aged 70.

John Joseph Gilhuley, M.D. Bellevue Hospital Medical College, 1894; of Bridgeport, Conn.; acting assistant surgeon in the Army during and after the Spanish-American War, with service in Porto Rico and the Philippine Islands; formerly city physician and fire department surgeon of Waterbury, Conn.; and later physician to the charities department of Bridgeport; died in Norwich, Conn., April 25, from acute nephritis, aged 36.

Elijah W. Jay, M.D. Cleveland College of Physicians and Surgeons, 1893; a member of the Iowa State Medical Society; coroner of Marshall county; member of the Marshalltown city council in 1895; who, while making an emergency run in an ambulance to a hospital with one of the victims of the Rock Island wreck at Green Mountain, March 21, was thrown from the ambulance, the fall resulting in a severe hernia, died in a hospital in Marshalltown, May 5, from pneumonia, aged 47.

Samuel T. Haffner, M.D. College of Physicians and Surgeons, Baltimore, 1874; a member of the American Medical Association, and once president of the Frederick County Medical Society; for several terms health officer of Frederick county and physician of Montevue Hospital, Frederick; elected clerk of the court in 1903; died at his home in Frederick, May 6, from angina pectoris, aged 61.

George W. Rohr, M.D. Northwestern University Medical School, 1862; Illinois Army Board, 1864; a member of the Illinois State Medical Society; surgeon of the Fifty-second Illinois Volunteer Infantry throughout the Civil War; local pension examiner; for more than forty years a practitioner of Rockford; died at his home, May 5, from heart disease, aged 76.

Jesse Lyman Conant, Jr., M.D. University of Vermont, Burlington, 1885; of Boise, Idaho; secretary of the Idaho State Board of Health; first lieutenant and assistant surgeon First Idaho Infantry, U. S. V. during the Spanish-American War with service in the Philippine Islands; died in the Josephine Hospital, Weiser, May 2, from cerebral hemorrhage, aged 54.

Francis Joseph Hilger, M.D. St. Louis College of Physicans and Surgeons, 1902; a member of the Iowa State Medical Society; lecturer on diseases of children in the training school for nurses at St. Joseph's Mercy Hospital, Dubuque, and a member of the medical staff of the hospital; died at his home in that city, May 3, from tuberculosis, aged 32.

John MacCurdy, M.D. Western Reserve University, Cleveland, 1858; Jefferson Medical College, 1859; a member of the Ohio State Medical Association; assistant surgeon of the Twenty-third Ohio Volunteer Infantry and a prisoner in Libby Prison during the Civil War; died at his home in Youngstown, May 4, from cancer, aged 74.

Benjamin R. Davidson, M.D. University of Maryland, Baltimore, 1867; for many years a practitioner of Anne Arundel county, Md.; and a resident of Davidsonville; physician to the county almshouse; treasurer of the county and register of wills; died in the Hebrew Hospital, Baltimore, May 1, from cerebral hemorrhage, aged 63.

George Briggs Richardson, M.D. Hospital College of Medicine, Louisville, 1890; formerly of Paradise, Ariz.; a member of the American Medical Association, and local surgeon for the El Paso and Southwestern Railroad; died at his home in Rodeo, N. M., May 2, from pneumonia, aged 48.

Henry Belt, M.D. Bellevue Hospital Medical College, 1898; a member of the American Medical Association, New York Academy of Medicine, and Medical Jurisprudence Society of New York; a specialist on neurology; died at his home in New York City, May 6, from pleurisy, aged 43.

William Troup Bell, M.D. University of Pennsylvania, Philadelphia, 1863; for several years superintendent of the City and County Hospital, San Francisco, and superintendent of the Masonic Home, Decoto, Cal.; died at his home in Lake Providence, La., April 30, aged 73.

James J. Linn (license, years of practice, Minn., 1887); for 52 years a practitioner of Minneapolis; one of the founders of St. Barnabas Hospital; and builder of the first isolation hospital in Minneapolis; died at his home, April 28, from heart disease, aged 83.

Cynthia Maria Nordstrom, M.D. Boston University School of Medicine, 1883; for sixteen years a member of the Malden (Mass.) School Board, and secretary of the medical board of the Malden Hospital; died at her home, May 4, from cerebral hemorrhage, aged 77.

Richard E. Garnett, M.D. University of Louisville, 1880; a member of the American Medical Association; physician of Barren county, Ky.; and secretary of the Glasgow Board of Health; died at his home in Glasgow, May 2, from heart disease, aged 54.

Robert S. McMurdy, M.D. Albany (N. Y.) Medical College, 1846; a member of the Minnesota State Medical Association; for 37 years a practitioner of Minneapolis; died at the home of his son in that city, April 29, from senile debility, aged 85.

Marshall P. Robinson, M.D. Eclectic Medical Institute, Cincinnati, 1876; formerly physician of Fayette county, Ky., and pension examining surgeon; died at the home of his sister in Lexington, May 6, from nephritis, aged 63.

Alvin Ephraim Wing, M.D. University of Colorado, Boulder, 1905; health officer of Rich county, and surgeon to the Utah and Wyoming Telephone Company; died at his home in Randolph, Utah, April 28, from erysipelas, aged 33.

James B. Robertson, M.D. University of Pennsylvania, Philadelphia, 1861; a surgeon in the Confederate service during the Civil War; died suddenly at his home in Clayton, N. C., April 28, from cerebral hemorrhage, aged 73.

Thomas Grant, M.D. Philadelphia University of Medicine and Surgery, 1876; of Liberty, N. Y.; died suddenly at the home of his sister in New York City, Dec. 30, 1909, from disease of the heart and kidneys, aged 73.

George Maxson Lamb, M.D. Hahnemann Medical College, Philadelphia, 1879; town physician and health officer of Hoosick Falls, N. Y., for twenty years; died at his home, May 3, from sarcoma of the throat, aged 52.

Samuel Charles Weeks, M.D. Tulane University, New Orleans, 1893; a member of the Louisiana State Medical Society; died at his home in New Orleans, April 28, from tuberculosis, aged 43.

James A. Ogden, M.D. University of Pennsylvania, Philadelphia, 1874; of Deadwood, S. D.; formerly of Parchalville, Philadelphia; died in Bunker Hill, Kan., April 24, from erysipelas, aged 61.

Edwin G. Keifer, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the Illinois State Medical Society; died at his home in Harvey, April 29, from arteriosclerosis, aged 66.

Louis Gustav Bauer, M.D. University of Pennsylvania, 1872; a member of the American Medical Association; died at his home in Germantown, Philadelphia, May 5, from cancer, aged 64.

Robert Martin, M.D. Starling Medical College, Columbus, Ohio, 1875; from 1881-1890, health commissioner of Milwaukee; died at his home in that city, May 2, from nephritis, aged 69.

Andrew J. Pennington, M.D. University of Alabama, Mobile, 1878; a member of the Louisiana State Medical Society; died at his home in Gibsland, April 26, from heart disease, aged 62.

William B. Robbins, M.D. Jefferson Medical College, 1873; of Catawissa, Pa.; died in the Jefferson Hospital, Philadelphia, April 29, after an operation for mastoiditis, aged 56.

Robert D. Gwin, M.D. Jefferson Medical College, 1855; surgeon in the Confederate service during the Civil War; died at his home near McKenzie, Tenn., April 29, aged 83.

George Washington Greaves, M.D. Rush Medical College, 1874; of Spencer, Iowa; died at the home of his son in Sturgeon Bay, Wis., April 22, from dropsy, aged 58.

John M. McKeage, M.D. University of Pennsylvania, Philadelphia, 1847; formerly an employee of the St. Louis health department; died in St. Louis, May 1, aged 85.

Severn M. Kelly, M.D. University of Minnesota, Minneapolis, 1905; formerly of Canby, Minn.; died at the home of his sister in Mankato, Minn., April 25, aged 30.

Hardy Murfrees Banks, M.D. New York University, New York City, 1851; of Englewood, N. J.; died at the home of his daughter in New York City, May 5, aged 79.

Tunis Housel Fisher, M.D. New York University, New York City, 1889; died at his home in South Brooklyn, May 7, from cerebral hemorrhage, aged 57.

John Henry Stemple, M.D. University of Maryland, Baltimore, 1901; died at his home in Conshohocken, Pa., April 19, after a short illness, aged 33.

Maurice Henry Walsh, M.D. Yale; formerly a practitioner of New Haven, Conn.; died in Fort Worth, Texas, April 4, from heart disease, aged 45.

Ernest Hamilton Smith, M.D. Tulane University, New Orleans, 1880; died at his home in Lacour, La., March 18, from heart disease, aged 54.

Frederick Castle, M.D. University of Michigan, Ann Arbor, 1869; died at his home in Lowell, Ind., April 19, from cerebral hemorrhage, aged 69.

Thomas F. Williams, M.D. Eclectic Medical Institute, Cincinnati, 1888; died at his home in Des Moines, April 25, from pneumonia, aged 46.

Joseph Goffin Bailey, M.D. University of Buffalo, N. Y., 1871; died at his home in Santa Ana, Cal., April 29, from heart disease, aged 65.

Alonzo Edson Robertson, M.D. Rush Medical College, 1893; died at his home in Mason City, Neb., May 3, from pneumonia, aged 38.

Edward James Rothe, M.D. Dublin; died at his home in Harison, N. J., April 21, from nephritis, aged 50.

Walter S. Dick (registration, Okla., 1908); died at his home in Baum, April 18, 1909, from pneumonia.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ST. LOUIS, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. [illegible] t. Louis, June 6.
New Jersey Medical Society, [illegible] 3-30.
North Carolina, Med. Soc. of [illegible] Beach, June 21.
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

AMERICAN PEDIATRIC SOCIETY

Annual Meeting, held in Washington, D. C., May 3-5, 1910

The President, DR. D. L. EDSALL, in the Chair

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Henry D. Chapin, New York; vice-president, Dr. J. Mason Knox, Baltimore; secretary, Dr. Samuel S. Adams, Washington, D. C. (reelected); treasurer, Dr. Charles Hunter Dunn, Boston; recorder and editor, Dr. L. E. La Fetra, New York; member of council, Dr. Isaac A. Abt, Chicago.

Lake Mohonk was selected as the next place of meeting.

President's Address: Importance of Pediatrics

DR. DAVID L. EDSALL, Philadelphia: The honor of serving for a year as the president of a group of men who are the highest representatives of their type of work in this country imposes on one the duty not merely of giving expression to complacent satisfaction, but also of devoting serious thought to the activities that may be open to the members of the society, as individuals or as a group of men, by which they might still further advance the honorable standing of the work that is their chief concern in life. Proper dignity and regard are not yet accredited in this country to a subject which has proved to me unquestionably the broadest, most complex, and most important division of general medicine; and proper standing will not be generally given to pediatrics in this country until better things are demanded for it by concerted action and by a large group of those who are the recognized leaders. The dignity of the intellectual results are determined by two things: first, by the opportunities offered those who teach the subject and by the manner in which these opportunities are made use of; second, by the extent to which those who follow that pursuit engage in matters that vitally affect the welfare not only of individuals with whom they come in immediate contact but rather of the public at large. There are ways in which great usefulness can be secured for pediatrics in both of these directions and the society, by the strength of carefully planned concerted action, could rapidly and greatly benefit the position of the work which it represents. The methods pursued by the teachers determine the standards demanded in the subject and the quality of the future exponents of the subject. Among the teachers of this subject there are men who have in certain ways no superiors in any part of the world. Concerning the provisions made for their teaching, however, there are points which may be justly commented on and not wholly favorably. Pediatrics is probably more inadequately provided for in most medical schools than any other important subject. This criticism is of the general group of schools, not of individual schools. In some the system of teaching is relatively excellent; but nowhere is such good provision made for the subject as that which is made for general medicine, surgery and obstetrics. Neurology, I think, has much more actual standing and recognition in the best medical schools than has pediatrics. Yet the problems of infancy and early childhood are much more distinct from general medicine than are the problems of neurology and more properly demand generous provision for instruction. At present, there are in this country at least twice the number of men of recognized distinction in neurology than there are in pediatrics. The explanation is patent: while the responsibility may be properly thrown in part on the shoulders of the administrators of medical schools it cannot be put wholly on them but must be shouldered by pediatrists themselves. It is a common and seemingly just statement that the clinical branches have in this country in the past generation by no means kept pace with the medical sciences in methods of teaching and investigation.

There should be better general conditions in teaching; it is a well-recognized fact among educators that unless a man does some kind of research, more or less continuously, he does not make, or at any rate does not long remain, a sound teacher; because the teacher, in order to make the student search for knowledge, must search continuously and diligently himself. The kind of research work done in any particular department is commonly accepted, and rightly so, as the best criterion of the character that the teaching in that department will exhibit. The chief essentials for making well-trained men and for attracting first-class men into a subject are that the men shall do most of the work themselves and not be merely told about it; that they shall be made precise and critical in their methods and that the craving for a sound understanding for the reason of things be satisfied by having them clearly comprehend the relation between the fundamental and the practical things. In these ways general medicine and general surgery have been transformed within two decades and now students do most of the work in the wards and dispensaries; in pediatrics the changes have been less distinctive. Cases are less frequently seen as problems to be worked out by the student himself. The propriety of studying pediatrics as a special subject rather than as a mere part of general medicine is based essentially on the fact that the infant and young child differ from adults enormously in degree and almost equally in kind, in susceptibility to infections and especially in liability to derangements of nutrition. This gives a greater justification for specialization than any based on difference in the organs of the body.

The difficulty in regard to the studying of cases can be overcome only by demanding that the clinical work in pediatrics shall be put on the same basis as that which is being struggled for and increasingly secured in medicine and surgery. The society could wisely take on itself a serious consideration of the manner in which teaching and investigation in this branch may be benefited and by individual and concerted action further whatever appears to be wise. In this way he thought results could be rapidly accomplished. Among other ways in which the society could take a useful part is a study of school conditions, and the industrial conditions among children, which should be studied by persons of calm and judicial temperament so that we may be informed on the actual state of affairs by those whose opinion would be more reliable than that of perhaps over-enthusiastic philanthropists.

Experimental Study of the Food Reactions in the Infant Stomach, Compared with Those in Vitro

Drs. D. M. Cowie and William D. Lyons, Ann Arbor, Mich.: Because of the many discordant views as to disturbances of infant digestion we have endeavored to ascertain how food reactions in the infant stomach compare with those *in vitro*. We determined first the stimulating effect of normal food; how it is altered by certain chemical substances and how that compared with results obtained in test tubes. We found that the stomach is capable of stimulation from the first day of life; that all the ferments are secreted at that time. The secretion of acid was represented by curves which gradually rise. Taking samples of stomach contents from time to time a curve characteristic of the majority of infants was obtained. We made from 150 to 200 analyses on 28 or 29 infants and rarely found free hydrochloric acid present in the stomach. It is not necessary in order for the stomach to perform all its physiologic functions. After fasting for 6 or 8 hours we found hydrochloric acid, but at the end of the feeding period or in the middle we rarely got free hydrochloric acid. We determined that the basic condition of calcium casein must be overcome before the rennin precipitate rennin curds. Conditions are different from those in test tubes. The statement that basic calcium chlorid hastens evacuation of the stomach is not true. Taking out fats and anything that would inhibit motility of the stomach we found that in 45 minutes the change had taken place producing the ordinary curd. Basic calcium chlorid did not prevent formation of curds in the stomach in the majority of cases. We also showed that acidity hastened the opening of the pylorus, and we believe that this had more to do with the evacuation of the stomach than the curds. The curds were easily crushed and large curds did not occur in normal conditions of the stomach. Calcium chlorid curds were easily precipitated. We concluded that it was not necessary to produce a perfectly soft curd, but to learn what chemical changes actually go on in the stomach. The acid control of the pylorus is of great importance.

Estimation of Chlorids in the Stomach Contents from Normal and from Atrophic Infants

Dr. A. H. Wentworth, Boston: This paper is a continuation of work alluded to in a previous article, the principle of the research being the discovery that hydrochloric acid is diminished in the stomach contents of atrophic infants. The secreting power in cases of infantile atrophy was much diminished. The stomach of atrophic infants probably fails to secrete sufficient hydrochloric acid to stimulate the duodenum. In the first series of cases the stomach contents were obtained one hour after eating and determination was made. Results showed diminished secretion of hydrochloric acid in every case. The same experiment was made with healthy infants with variable results; in 4 cases it was greater and in 3 cases it approximated that of the atrophic infants. The results were not conclusive and a second series of observations were made. This article gives the results of the second series and certain conclusions that may be drawn from them. Unfiltered stomach contents were used in every case; soft rubber No. 19 French catheters were used; the stomach contents being obtained with the infant lying on its side. The diagnosis of infantile atrophy was made from clinical evidence alone. The possible relation of stomach contents to degree of acidity appeared not to be present in this series. A few infants showed marked gain in weight with only a trace of hydrochloric acid in the gastric juice. There was rarely more than a trace of hydrochloric acid from the stomach of atrophic infants fed on cow's milk. The results corresponded closely with those of the experiments previously made. The stomach contents of well-nourished infants fed on cow's milk showed diminished amount of hydrochloric acid, corresponding closely to about one-half of the atrophic infants. Although the diminution was marked, it was never so extreme as in the atrophic infants. The results tend to prove that marked diminution of hydrochloric acid occurs in infantile atrophy. It was also shown that these infants can gain markedly in weight without hydrochloric acid in the gastric juice, and that there is greater variation in hydrochloric acid in the stomach contents of these infants than in normal infants.

A Study of the Gastric Contents and Motility in Breast-Fed and Bottle-Fed Infants

Dr. Henry Heiman, New York, exhibited charts showing the experiments that were conducted in the childrens' ward at Mount Sinai Hospital, the study having been for the purpose of adding to the data on the subject of gastric digestion in infants. The first group consisted of 20 normal infants from 3 to 7 days old; in the second group were 13 artificially fed infants from 3 weeks to 7 months old. In all the temperature was normal for at least a week and the condition good. The method of procedure was, with the new-born, to weigh the baby before and after nursing. At the end of one hour the stomach contents were removed with a French catheter. No preliminary lavage was performed. In the second group 4 examinations were made for each case. The stomach contents received in a glass jar and measured in graduate, then filtered and the filtrate used for the tests. In the first group 30 specimens were examined. The quantity of milk consumed at each feeding was from 30 to 200 grams—considerably above the figures usually assumed at that time of life. In general, the pepticaction was more at the end of one hour than at the end of a half hour. The work showed in new-born infants the large amount of milk taken at one nursing; that total acidity was practically the same at the end of one hour as at the end of a half hour;

absence of free hydrochloric acid in all cases; presence of rennin in two-thirds; presence of lactic acid in one-half of the cases. In the second group pepsin was present in only 6 cases; rennin in but 2. I think that it remains for future study to place the matter of gastric analysis of infants on as firm a basis as that of adults.

Studies of the Effect of Varying Quantities of Fat and of the Presence of Various Salts on Digestion and Metabolism

Drs. Charles F. Fife and B. S. Veeder, Philadelphia, undertook studies to determine the absorption of fat in cases of chronic intestinal disease in infants. The infants were placed on definite formulas for some days and the urine and feces completely collected. Case 1, infant nine months, weight 10 pounds 9 ounces. Case 2, aged 10 months, weight 11 pounds 10 ounces. Tables and charts were exhibited to show the varying formulæ. The work showed in both cases that fat absorption was below that of healthy infants. The total amount was less the less fat ingested. When little fat was given the percentage of absorption was much less. The amount of carbohydrate present had no influence on fat absorption. Evidence pointed to the necessity of the splitting of fats before digestion. They found that in the low fat periods the actual amount of soaps in the feces was higher than in the high fat periods. The lower the fat ingestion the higher the amount of soaps. The work showed lowered fat absorption in these two cases of chronic intestinal disease while most writers claim that there is not much difference. They did not find any definite relation between the calcium, in the fat, the calcium in relation to the total amount of fat, or relation to the soaps in the feces.

Results of Substitute Feeding in Premature Infants

Dr. Maynard Ladd, Boston, concludes from a study of 125 cases of infants, in which the total mortality was 65.6, no infant under 6 months surviving, that modified milk must be considered as unsatisfactory food for premature infants and should be used only when breast milk connot be obtained. Incubators were not employed.

Effect of High-Fat and Low-Fat Diet on the Nitrogenous Metabolism of Infants

Drs. John Howland and Robert A. Cooke, New York, presented the results obtained with 3 infants put in a metabolic apparatus:

On a fat-free diet all the calories could not be supplied. On a high fat diet the caloric value rises. The protein given represented 6/10 gm. nitrogen per kilo. The first boy began with practically fat-free diet which was increased gradually until he was taking 76 gms. a day of food containing over 7 per cent. of fat; he was kept on this 2½ months, then reduced to fat-free diet. When on fat-free diet the stools were brownish, frequent and thin; as it increased they became light, and on high-fat diet whitish. A second child, boy of 6 months, badly nourished with ischiorectal abscess, had stools brownish and of very foul odor, as the fat intake was increased they became light and finally white and almost dry. The ammonium output was relatively high throughout. On medium-fat diet the child did best. In Case 3 the child was a small badly nourished infant of 5 months; the investigation lasted 3 weeks. At first he took fat-free food, then it was increased rapidly. He never did well at any time; showed definite reaction to all fat feeding. The first child showed only benefit; the second with excessive amount of fat showed disturbance and the last child was upset by a moderate intake of fat. The results showed the danger of trying to draw definite conclusions from limited material. We do not advise the use of too much fat, but the individual tolerance of some infants is so great that the greatest variation may not produce any harmful results. The best diet is one containing fat and sugar both in moderation.

Nutrition of the Feeble Infant: (a) Motility of the Stomach; (b) Results of a Trial of Finkelstein's Method

Dr. Henry D. Chapin, New York: The proper nourishment of feeble infants is a problem that taxes the resources of the most skilful pediatrist. Digestion and assimilation may be poor, either by inheritance or from faulty feeding, and when from any cause, the general vitality of the infant is lowered, the digestive tract is usually the first to suffer and the last to recover tone. Improved diet and hygiene offered the only successful treatment; drugs are of little or no avail. In normal infants during health no great difficulty is encountered in reference to the kind and quantity of food. In feeble and badly nourished infants, however, the weak action of the stomach, especially in its muscular power, is the source of much trouble. With this in mind, a series of 21 infants were studied with regard to gastric motility. The ages were as follows: Two weeks, 1; three weeks, 1; six weeks, 1; two months, 1; three months, 6; four months, 4; five months, 2; six months, 1; seven months, 1; twelve months, 3. These infants were taken from the wards of the hospital and represented all grades of malnutrition from the begining cases to those in the last stages of atrophy. It was not possible to form any definite conclusions as to gastric motility based on the age of the child from these cases. Of 19 examined at the end of 3 hours, only 6 could be shown to have approximately empty stomachs, and these 6, with one exception, were holding their own and in no case could free hydrochloric acid be determined. In 13 out of the 19 it was absolutely demonstrated that there was a considerable residual amount of food still remaining in the stomach. Butyric acid fermentation was marked in 6 and in 2 in which the stomach was apparently empty there was found a trace of butyric acid. In 7 cases examined at the end of 3½ to 4 hours 5 were surely empty; of the remaining 2 cases one showed many curds at the end of 4½ hours, while the other showed only a few small curds. Few if any of the children were normal and conclusions drawn from the cases had value only as a study in the nourishment of a feeble child. There is little doubt that in a large majority of cases the feeble infant with digestive disturbance is fed at too frequent intervals; too often a second feeding being given before the previous meal has passed through the pylorus, with the result that each successive feeding is contaminated; in the feeble infant gastric motility is greatly decreased and it is often necessary to increase the intervals between feedings. There is an analogy between this state in the infant and the condition known as myasthenia gastrica in the adult, an important element in the treatment of which is to make certain that the stomach is never overloaded. The form of the protein has frequently an important place in the management of infants and changing the form of the carbohydrates also frequently shows a marked effect in the infant's progress.

In 20 cases I tried Finkelstein's method of feeding, based on the idea that instead of the fat or protein being the usual cause of trouble most digestive disturbances are due to the sugar of milk, and the principle of the new method being cutting down of the amount of milk sugar and of the salts, adding in place of this casein and fat, and substituting other forms of carbohydrates for the milk sugar. They were all hospital cases and presented the usual difficulties of infants previously badly fed. The stools generally became grey, homogeneous, with putty-like consistence; there was usually a tendency to constipation. The results were not very promising. Eight gained slightly in weight while twelve lost. I believe that when benefits follow this method of feeding the results are due more to the form in which the protein is given than to the lessened amount of sugar in the mixture. Judging from the character of the stools it might act well in certain forms of diarrhea.

Discussion on Infant Stomach

Dr. F. S. Meara, New York: Has Dr. Wentworth taken into consideration the relation of the fat to the quantity of hydrochloric acid? Does Dr. Cowie attribute the opening of the pylorus to the action of the acid on the gastric or duodenal side?

Dr. A. H. Wentworth, Boston: In Dr. Veeder's cases were the periods of feeding continuous or not and did one period run into another? Also, was the percentage of fat per gram ascertained? Is the greater percentage of all the fats excreted in the form of soap?

Dr. Henry D. Chapin, New York: So far as the incubators or padded cribs are concerned, I prefer the cribs as I have found that the best incubators are not as good as the crib. I prefer a varying temperature to the steady temperature of the incubators. I have never saved a premature infant without breast milk.

Dr. Isaac Abt, Chicago: I have been impressed with the discrepancy in results and various interpretations of those doing the chemical research work, though I believe that there would be important definite results ultimately. The dogmatic methods used in some quarters in making interpretations and attempting to make clinical deductions based on chemical results so far obtained is somewhat premature. Besides the chemistry of digestion there is a biology of digestion; the ultimate appropriation of the molecule and its combination with the cell is of more importance perhaps than the chemical details.

Dr. Samuel L. Bernstein, Cleveland: I agree with Dr. Chapin in regard to the advantages of the crib over the incubator; the electric heating pad with maternal feeding has been the means of saving a number of these premature infants.

Dr. D. M. Cowie, Ann Arbor: I am inclined to believe that it is the action of the acidity on the duodenal side that has to do with the retention of food in the stomach.

Dr. B. S. Veeder, Philadelphia: The experiments extended over 7 or 8 weeks—the child being first put on a formula for 3 or 4 days. Soaps were not tested for separately, but we did compute the percentage of soaps.

Dr. Henry D. Chapin, New York: It is of the utmost importance to have the meals properly spaced, as otherwise there remains a residuum of food in the stomach to contaminate each successive addition of food. This constantly recurring contamination and over-burdening of the stomach resulted in fermentation and in time gastric dilatation with loss in tone of the muscular coats of the stomach, thus explaining how a chronic digestive disturbance may lead to the condition known as atrophy. I am in sympathy with Dr. Abt in regard to studying these questions along the idea of biology.

Dr. John Howland, New York: The biologic question is largely hypothetical; it cannot be expressed in figures or in charts, and while very interesting it leads no further than to saying that in each individual there is an individual variation. Until the work was done in terms that could be expressed in figures there had not been a beginning.

Amyotonia Congenita

Dr. J. P. Crozer Griffith, Philadelphia: Ten years ago, Oppenheim in Berlin noticed a peculiar symptom-complex and reported a few cases but not in detail. These patients had a condition of flaccid palsy, which appeared to be congenital, varying up to complete paralysis, but no actual atrophy. He called this myotonia congenita. As the symptoms were so similar to myatonic congenita, I have called the condition described in this paper amyotonia congenita. I found in all 48 cases besides my own. In December, a child of 15 months was brought to me; no family history, except intemperance in both father and mother. A diagnosis of myolitis had been made. The mother said that the child had never been able to do anything with its hands; the position of the hands suggested tetany. Electric reactions did not give reaction for poliomyelitis or tetany, in fact no reactions could be obtained. Dr. Mills suggested that it was a case of myotonia and further investigation corroborated that. The child could not turn itself in bed; when seated in bed it flopped about in any direction; the head fell forward or backward, anywhere gravity took it. There was affection of sensation. Tendon reflexes were abolished; respirations were almost entirely abdominal, the respiratory muscles being affected. The child was thought at first to be very weak-minded. In four and a half months it has improved wonderfully. It can now take a biscuit in the hand and slowly lift it to the mouth and bite at it.

There seems to be reason to believe that the condition is congenital either in its manifestation or in its origin. It is an affection of the muscles not controlled by the cranial nerves. As to the pathology, there have been 8 observations more or less complete but no one has come to any positive conclusion. There was in most every instance loss of striation of muscles or less of nuclei. In some there was involvement of the anterior horns of the cord but this is not yet certain because the changes described were so slight. Spiller maintained that there was no change in the nerve centers. The disease must be distinguished from poliomyelitis and from hypertonia. Nothing much could be said as to prognosis. A number of patients have died from respiratory involvement. Treatment is hygienic, with electricity and massage. No Wassermann reaction was made in my case, but so far as I could learn there was no history or symptom of syphilis.

A Study of the Value of Brudzinski's "Neck Sign" and Contralateral Reflex in the Diagnosis of Meningitis in Infancy and Childhood

Dr. J. Lovett Morse, Boston: Brudzinski in a paper on "the contralateral reflexes in the legs in childhood," published in 1908, drew attention to a sign which he found in tuberculous and epidemic meningitis, and occasionally in other conditions, but never in healthy children. This sign was a concomitant reflex of the leg on one side when passive flexion of the leg on the other side was made. He concluded that in connection with other signs such as Kernig's and Babinski's, it was useful in the differential diagnosis of meningitis. In a later paper, he stated that further study had confirmed him in his conviction of the value of this sign. In 1909, Brudzinski published another paper in which he stated that in meningitis passive flexion of the neck forward causes flexion of the legs at the hips and knees and a marked flexion of the legs on the pelvis. He found this sign in 20 of 21 cases of tuberculous, in all of 11 of cerebrospinal, and in 2 of pneumococcus meningitis. I examined 400 children, either well, or ill, with diseases other than meningitis, as to the presence of this sign; 90 were well; 150 suffered from disease of the respiratory tract; 90 had various diseases of the gastroenteric tract; 31 had diseases of the nervous system other than meningitis; the remainder had a variety of diseases, typhoid, nephritis, influenza, heart disease, rickets, purpura, scarlet fever, measles, etc. Neither the neck sign, nor the contralateral reflex was elicited in any instance. I concluded from the study of these 400 cases that Brudzinski and his followers are correct in their statements that neither the neck nor the contralateral reflex are present in well children or in those ill with diseases other than of the nervous system, and that these signs are very seldom seen in diseases of the nervous system other than meningitis. Their presence in an acute disease is strong evidence of meningitis; their absence does not exclude it. The diagnostic value of the contralateral reflex is less than that of the neck sign. They occur in all types of meningitis and so are of no importance in differentiation.

DISCUSSION

Dr. Mathias Nicoll, New York, three weeks ago had a case in which he found the sign positive. When left an hour the child would give a decided contralateral reflex reaction, but if it was induced several times in succession there was much less marked reaction. He had also had an opportunity of trying it in a case of cerebrospinal meningitis in which he had been able to get a very positive response, though it varies in intensity.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Continued from page 1630)

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Reuben Peterson, Ann Arbor, Mich.; vice-presidents, Dr. John F. Thompson, Portland, Maine; Dr. John G. Clark, Philadelphia; treasurer, Dr. J. Wesley Bovée, Washington, D. C.; secretary, Dr. LeRoy Broun, New York.

Atlantic City, N. J., was selected as the place for holding the next meting.

Primary Carcinoma of the Female Urethra; Hematoma of the Broad Ligament Recurring with Pregnancy; Fibroid Tumor of the Ovarian Ligament

Dr. Walter P. Manton, Detroit: Primary carcinoma of the female urethra is among the rarest of malignant manifestations; a careful search of the literature up to 1910 gives the reports of but thirty-five cases, including my own, and failed to reveal the report of a similar case of hematoma of the broad ligament recurring with pregnancy. The onl references to the occurrence of fibroids of the ovarian ligament which I have been able to find are the two cases reported by Doran in 1896. In both of these cystic cavities existed.

DISCUSSION

Dr. Reuben Peterson, Ann Arbor, Mich.: I have had two cases of this rare affection, one of which I have previously reported. A woman on whom I operated four or five years ago had a carcinoma of the meatus which extended up into the urethra about half an inch. I removed it so radically that incontinence followed with subsequent prolapse of the bladder mucosa through the remainder of the urethra. The woman complained of this, and so I sewed up the opening and made an opening from the bladder into the vagina. Then she complained of incontinence. I did a colpocleisis and made an opening into the rectum. I reported this case at a meeting of the American Medical Association, but do so again now in order to give the subsequent history of the patient. That woman has passed her urine through the rectum ever since, and to-day she is as well and contented as one can be in that condition. I examined the urine two and a half years ago and she had no ascending pyelonephritis, which is interesting because it has been contended that where this communication is established with the rectum pyelonephritis will take place: but it has not occurred in this case. The second case of primary carcinoma of the urethra happened a short time ago. It looked like urethral caruncle. However, microscopic examination showed it to be primary carcinoma. In this case I removed about one-third of the urethra, and there has been no recurrence of the condition for two years.

Dr. Clement Cleveland, New York: I have had two cases of primary cancer of the meatus, in one of which I did a radical operation, and the disease returned. In the second case I resorted to the use of the actual cautery, and I believe that this treatment will afford permanent relief of such a condition when surgery is of little value. I have seen such positive results from radium in the hands of Dr. Abbe, not only in cases of cancer of the vagina, fascial cancer, cancer on the lip, gum, nose and ear, that I believe its application to cancer of the urethra would be of great importance. I feel very positive that if the radium is used in such cases we would see as good results in cancer of the urethra as in cancer of the lip, nose or the ear.

Dr. J. Riddle Goffe, New York: Did Dr. Peterson use the cautery in the removal of these growths?

Dr. Peterson: I did not.

Dr. Goffe: I have had one remarkable case of malignant urethral caruncle or primary carcinoma of the urethra. This was a number of years ago. The woman gave a history of having been operated on by Dr. William Lusk six years previously. She stated that Dr. Lusk told her at the time that she had cancer and he did not dare remove it, but that he would make a button-hole in the urethra to save it from irritation, and that this was the best he could do. For six years she was comparatively comfortable. She had control of the urine, but passed it through the button-hole in the urethra. At the time she came to me there was a cauliflower excrescence protruding from the meatus, which was of bright cherry-red color, exquisitely sensitive, and the source of constant pain. With the cautery I removed all the urethra and the surrounding tissue from the posterior angle of the urethra, taking all but one-fourth of the urethra at the neck of the bladder. She made a comfortable recovery from the interference, but inside of a year the disease returned with the greatest violence, involving all surrounding structures and becoming constitutional. She died with great suffering about a year after the procedure I had instituted.

Dr. Frederick J. Taussig, St. Louis: In a case of carcinoma of the urethra, that occurred in the practice of Dr. Dorsett and myself, the patient was kept under observation for a long time. I saw her in 1900, and at that time there was a caruncle, chronic urethritis, a retroverted uterus, and a relaxed pelvic floor. I operated for the retroversion and for repair of the pelvic floor, but did nothing further to the urethra. Three years later she returned with a history of bloody discharge for three weeks. She had been examined two months previously by an experienced man and nothing had been detected so far as the urethra was concerned. I found an infiltrating cancer involving the lower part of the urethra. Operation consisted in removing the entire urethra to the point of its entrance in the bladder, putting a purse-string suture around the opening that was left in the bladder so as to strengthen the muscular tissue there, and then, as a further precaution, removing the external inguinal glands on both sides, although there was no glandular enlargement at the time. The patient made a good recovery from the operation; there was slight partial incontinence. She was kept under observation for 9 months, and then small nodules were noticed in the inguinal region and also about the internal iliac vessels, the triangle between the external and internal iliac vessels. A second operation was done, removing these affected glands, although difficulty was experienced in removing the disease about the iliac vessels on account of adhesions. A year and a half after the primary operation the patient returned with recurrence in both inguinal regions and higher up about the aorta. She was kept at the Skin and Cancer Hospital 2 or 3 months under trypsin treatment, which at that time seemed to offer a possible excuse for its use, and with no benefit. She died, and at autopsy there was absolutely no recurrence at the primary site. The tissues about the urethra and bladder were absolutely free from carcinoma; but the glandular involvement was not merely confined to the lymphatics; it involved also the liver and spleen.

Dr. Seth C. Gordon, Portland, Maine: A woman of 70 had a growth for nearly a year about the urethra, and at the time she came under my care she had been treated by caustics for 6 or 8 months. The growth was as large as a walunt and bled on the slightest touch; I removed it with three-quarters of an inch of the urethra, bringing the remainder down and attaching it. The operation was done 4 years ago and there has been no return. Examination showed the growth to be carcinoma.

Dr. Hiram N. Vineberg, New York: Some years ago I had a case of primary carcinoma of the urethra involving the anterior third of the urethra. I did a thorough operation, went close to the vesical sphincter, and as a result there was slight incontinence. Prior to operation the woman had no pain or bleeding. Microscopic examination proved the growth to be carcinoma. I did a plastic operation later and in trying to build up the artificial urethra and bringing the stump of the urethra forward was only partially successful. The woman could retain urine while in bed for an hour or so. She was under observation three years and during that time there was no recurrence. I have not heard from her since. At that time I collected eleven cases of primary carcinoma of the urethra.

Dr. Francis H. Davenport, Boston: I saw a patient who had been under the care of a woman practitioner, who had tried the injection of serum for this condition of the urethra, and with some comfort to the patient, but not an arrest of the disease. When I saw the patient nearly one-quarter of the urethra was involved, so that it seemed absolutely impossible to remove everything radically. Radium was tried for several months, but not so thoroughly as the surgeon would like to have used it, owing to the fact that it could not be applied in the urethra itself on account of severe pain, but only externally from the vaginal side. Finally the growth became so large that there was retention of urine and a suprapubic fistula had to be made, which relieved the immediate symptoms, but within three months she died from exhaustion.

Dr. I. S. Stone, Washington, D. C.: Next to the report of individual cases it is essential to know something about how wide the excision should extend, and how far the malignant process extends when we begin to operate on patients with early manifestations of carcinoma of the urethra. All the cases of cancer in this region in my experience have ultimately resulted fatally.

Dr. Joseph Brettauer, New York: I have repeatedly had patients sent to me with a diagnosis of carcinoma of the urethra, in whom microscopic examination showed the lesion to be urethral caruncle. At times it is very difficult to decide whether the growth is malignant or not; as a rule, the younger the patient, the more malignant the growth.

Dr. Edward L. Duer, Philadelphia: Recently I did an extensive operation for a carcinomatous growth of the urethra which extended well into the end of the vagina. It was difficult to operate without enlarging the opening nearly into the rectum. I removed the growth and the wound healed. The condition returned in a short time after the operation, and I applied the *x*-ray to the external parts, but in the course of a few months the disease returned, and radium was tried. I commenced with a weak preparation, and it seemed to have little or no impression. The strength was then increased 100 per cent., and the patient improved and has continued to improve. Previous to this treatment she had been confined to bed for nearly a year. She had to be carried to the country and could not walk. She now goes shopping, and seemingly is perfectly well so far as the last examination showed.

DR. W. P. MANTON: I wonder whether or not all the cases so reported are really cases of primary carcinoma of the urethra. There are many cases of periurethral carcinoma that are mistaken for urethral cancer, and no doubt some of them belong to this class.

Improved Operation for Extreme Cases of Procidentia and Cystocele

DR. J. RIDDLE GOFFE, New York: Procidentia and cystocele are the results of three lesions: first, a descent or relaxation of the supports above; second, laceration of the perineum to the second degree; third, stretching and tearing of the fascia at the base of the bladder, producing a hernia. The support below is only indirect and of secondary importance. The true principle of support is that of suspension, and in order to secure a permanent result after operation the organs must be suspended or hung from above. The broad and round ligaments and the fascia lata are the proper tissues to utilize for this support. As a rule, these conditions obtain in patients at or beyond the menopause. In child-bearing women, especially if they desire children, the uterus should be carried into normal position and retained there by shortening the uterosacral and round ligaments. The bladder is then freed from all attachments to the vagina and lateral structures and carried up and spread out over the face of the uterus and broad ligaments. The vaginal sheath and wall are then cut away in the median line sufficiently to bring it up snug against the base of the bladder when stitched from side to side. If the perineum is torn to the second degree and a rectocele is present, the floor of the pelvis is restored. In patients at or beyond the menopause the uterus is removed, the broad ligaments beginning with the round ligaments at their upper borders are then stitched together across the pelvis from side to side, from the round ligaments down to the cardinal ligaments, thus turning the raw edges of the broad ligaments posteriorly. On the plane of tissue thus constructed, the bladder is spread out and stitched in such a way as to carry the organ high in the pelvis, thus restoring the base of the bladder as it is originally to a comparatively immobile foundation, and restoring the hinges and the cornua of the bladder as so graphically described by Dr. Kelly. The upper end of the vagina is also stitched to the broad ligament, bringing it up taut against the base of the bladder, the fascia lata is cut away and stitched as previously described and the perineum repaired. To accomplish this work it is necessary at the beginning of the operation to make a longitudinal incision in the vagina along its anterior wall throughout its entire length and dissect the bladder freely from all its attachments. The results in my opinion are satisfactory and permanent.

DISCUSSION

DR. CHARLES JEWETT, Brooklyn, N. Y.: I have had the privilege and pleasure of watching Dr. Goffe do this work, and his technic is the most complete and perfect of any I know. He concludes the operation by securely building up the perineal buttress beneath the bladder.

DR. I. S. STONE, Washington, D. C.: This method, or a slight modification of it, has given me the utmost satisfaction. I have no knowledge of any case of cystocele or prolapse having recurred if the work has been properly done.

DR. HENRY T. BYFORD, Chicago, described a modified operation which he does in these cases.

DR. SETH C. GORDON, Portland, Maine: I am satisfied that all of the work we have done heretofore in the effort to fix the uterus, after complete procidentia, has been of little avail. The uterus gives way after a while. Recently I have been removing the uterus in every case and stitching up remnants of the vagina to the broad ligaments, and fixing it as well as possible. I believe that we open a new line of work in that direction when we begin by removing the uterus.

DR. CLEMENT CLEVELAND, New York: I have followed the operation described by Dr. Goffe for some years. In my hands it has been successful in the majority of cases.

DR. C. C. FREDERICK, Buffalo, N. Y.: I have been doing this operation for 4 or 5 years, and I have taken the position that in case of advanced procidentia the removal of the uterus, as a part of the operation, is the *sine qua non* to success. I have done 75 or 78 of these operation for procidentia, and have invariably used catgut for suture material and have not had any ill results from it.

DR. J. M. BALDY, Philadelphia: This operation is so extensive in its denudative qualities and so dangerous in its possible results as to be absolutely unwarranted as a simple cystocele operation.

DR. LEROY BROUN, New York: I have often seen Dr. Goffe do this operation. I have done it myself, and I have had the privilege of seeing one of the patients on whom Dr. Goffe operated, and a more ideally perfect result I have never seen. The uterus was in excellent position.

DR. GEORGE GRAY WARD, JR., New York: Dr. Goffe taught me this operation five or six years ago, and since then I have done it in several instances. The results speak for themselves; I have not seen a failure from the operation when it has been properly done. The patient is satisfied, and that is the best part after all.

Intramural Sequestration and Fixation of Uterus for Prolapse When Pregnancy Is Not Possible

DR. PHILANDER A. HARRIS, Paterson, N. J.: I have subjected six women to a possibly novel procedure for the cure of procidentia uteri, and since these operations have been followed by gratifying results, I wish to describe the operation for whatever value it may possess for others. A median abdominal incision is made from one inch beneath the umbilicus for three or four inches, and through it the uterus is delivered. While an assistant grasps and draws the uterus well out of the incision, the cut edges of the parietal peritoneum are sewn to and around the uterus at the junction of the cervix with its corpus. This sewing crosses the broad ligament at either side about two inches away from the fundus uteri. After thus attaching the opposing cut edges of the peritoneum to the uterus and the broad ligaments, the suturing is carried upward to the top of the incision, thus closing the peritoneal cavity with the corpus and fundus still held in the grasp of the assistant, and, of course, outside of the peritoneal cavity. While the assistant continues to hold the uterus outside of the incision, a 5/16-inch iodoform gauze and rubber tissue drain is placed on top of the muscle and beneath the fascia to a point two or three inches to one side of the incision, at which point it is made to emerge from a small stab wound. The tapering tail of this drain is placed in the wound between the peritoneum and fascia. The anterior surface of the corpus and fundus uteri are next denuded with a knife, after which the fundus is seized with a hook or volsellum forceps, with which it is dragged upward as far as possible toward the umbilicus, and made to nestle in the incision anterior to the peritoneum and between the recti muscles. The fascia is next sewn from the umbilicus downward with running stitches of chromicized catgut. Wherever the corpus and fundus uteri are in contact with the fascia as it is being closed, the stitches are made to include sufficient musculature of the uterus to fix it in its sequestered position. The sewing of the skin with a running catgut suture completes the operation unless the patient is obese, in which case a small drain is placed between the fascia and the skin and made to emerge from a stab wound two inches or more to one side of the incision. The application of the usual gauze dressing and adhesive straps completes the operation. The draining tubes are partly withdrawn in two or three days, but generally not removed until ten days or more after operation.

(*To be continued*)

AMERICAN GYNECOLOGIC SOCIETY AND AMERICAN SURGICAL ASSOCIATION

Joint Meeting, held in Washington, D. C., May 5, 1910

What Are the End-Results of Surgery for Relief of Neurasthenic Conditions Associated with Various Visceral Ptoses?

To What Extent Do They Improve the Neurasthenic State Itself?

Dr. Edward Reynolds, Boston, in opening the discussion took up the etiology of the ptoses and their relation to neurasthenia. Satisfactory end-results depend on a successful initial study of the causation of the individual ptosis, and of its consequent relation to the neurasthenia. Technic is a subordinate matter. Ptosis is never a primary affection, but is always secondary to some other condition. The causes of ptosis are (a) local anatomic or developmental anomalies, and (b) general systemic mechanical conditions. The local causes of ptoses of pelvic viscera are inflammatory lesions, trauma, high rectovaginal septum, persistent ileolumbar ligament, and antiflexion of the cervix. Operations should be adapted to these causes. The general predisposing causes of all ptoses are (1) general muscular relaxation, and (2) static abnormalities, such as the round shouldered, hollow-backed position, pendulous abdomen, the over-feminine figure, and the habitual use of bad corsets. All these static variations are characterized by a forward displacement of the center of gravity. The mechanics of adjustment of posture are comprised in the use of therapeutic shoes and corsets. Mechanical therapeutics is always necessary in static cases. Ptosis is sometimes the result of neurasthenia, sometimes its cause. The main guide is the relative chronologic sequence of local and general symptoms. It is important to avoid operation in neurasthenics unless complete relief of the local symptoms can be expected. Subsequent care is important.

Dr. Joseph A. Blake, New York: Patients suffering from visceral ptosis and neurasthenia should be divided into two classes. First, those in which ptosis of the organ or organs contributes to the neurasthenic state simply by the effect produced on the organs themselves. In this category we have displacements of the kidney, uterus, colon, stomach, etc. The results of operations on this class are dependent on the degree in which the condition affected the neurasthenic state. In the second class of cases a vicious circle is established, and ptosis increases the neurasthenic state if it is not the underlying cause. Operations undertaken on patients of this class must have in view the relief of the autointoxication, otherwise they will only be productive of harm. Partial or total exclusion of the colon is a rational procedure in certain cases and good results may be expected, but the greatest care should be exercised in the selection of cases for applying this operation.

Dr. John G. Clark, Philadelphia: We have a defective individual, as a rule, to deal with from the start, and as the result of this defect we cannot hope for the same surgical results as we would get from operating on patients with acute diseases. The individual perhaps has had autointoxication from the beginning, or was imperfectly developed from the start, and therefore a bad surgical subject for immediate or ultimate results, and it is particularly in this class of cases where surgeons should make haste slowly. In the last five or ten years I have tried various types of suspension operations in visceral ptoses, such as the Coffey or the Deyea type of operation, and have not had more than 75 per cent. of functional relief after following these cases carefully. In those cases in which there is a structural defect, as shown by obstructive and retention symptoms, one does not hope to get more than 50 per cent. of functional relief.

Dr. Maurice H. Richardson, Boston: I approach the treatment of the neurasthenic for whatever cause, whether a definite, unmistakable pathologic lesion, or a ptosis, or a slight lesion, like a displacement of the kidney, with the utmost discouragement. One of my recent cases was a woman whose abdomen was covered with scars from repeated operations that had been performed without relief, her last state being worse than the first. Finally, it was found that this woman's gall-bladder was full of gall-stones, which were removed, followed by relief. As to enteroptosis and operations for large dilatations of the intestine, I can recall examples of cases in which I was driven to operation after these patients had gone to the neurologist, the gynecologist, and the general surgeon, and had been treated by them without relief, but with the same general results of discouragement. In one instance, 8 or 10 years ago, I resected the large intestine 2 or 3 times with the hope of affording relief, but the patient was in the same neurasthenic condition as in the first place. In addition to the operation on the intestine she had developed a large ovarian cyst, which was removed. Before operating on these patients we should be sure, in the *first place, that there is a lesion; second, that it is the chief* cause of the neurasthenia; third, we should see if it canont be cured without operation, but if operation is to be done, we should see to it that it does not subject the patient to too great a danger. I believe that neurasthenia is more of a disease than we give it credit for; that it is some central, organic or nervous condition on which operative surgery will have about as much effect as the surgical treatment of epilepsy, and Dr. Wood once said that it would do just as much good to amputate a toe as to resect the motor area of the brain for the relief of this condition.

Dr. Richard R. Smith, Grand Rapids, Mich., restricted his remarks to a general consideration of the etiologic factors to be considered in connection with visceral prolapse and accompanying neurasthenia in women who present themselves to the gynecologist for the relief of symptoms.

Dr. Lewis S. McMurtry, Louisville, Ky.: How often, after difficult manipulations in the abdomen in normal individuals, so to speak, do we leave in the haste of an operation the viscera disposed in every possible irregular manner, and yet these things correct themselves in normal individuals, and they necessarily have no connection with neurasthenia, so that we must have a little more evidence than we have at present that visceral ptoses are the principal factors in the production of this condition of the nervous system and metabolism of the body known as neurasthenia. As to the clinical side of the subject, my experience is like that which has been related by other surgeons. Operative procedures for all these ptoses, whether of the pelvic organs, the kidney, or the alimentary tract, have been unsatisfactory. Neurasthenia occurs in both sexes in all stations and all conditions of life, among the rich and the poor, and its exact nature or its pathology is as yet unknown, and until it is more definitely known the results are going to be as we see them reported at present. What we need is a definite statement as to the origin or cause of this condition which we know as neurasthenia.

Dr. William M. Polk, New York: In patients who present themselves with ptoses that have been described as belonging to the upper abdominal cavity, we have conditions that unquestionably we balk before, but here I am convinced that orthopedics furnishes a most efficient aid, and the lines laid down by Dr. Reynolds and by Dr. Lovett of Boston, who has been associated with him, will be the means of benefiting many of the conditions for which surgery heretofore has been considered the only means of relief. But the psychoneurologist should not be forgotten in connection with these cases. There is no reason why we as gynecologists and surgeons should bear all the burden in these cases. I have come to the conclusion that there is a conspiracy on the part of the neurologist to land on us a class of cases which he knows full well will test every particle of his acumen, and here is a brilliant opportunity for the psychoneurologist to exploit himself to the fullest extent. When these neurasthenics come to us we should say to them, first pass through the hands of a competent orthopedist; pass next through the hands of a conscientious self-doubting neurologist, but beware of the over-confident neurologist, and then you can say, madam, or sir, as the case may be, as you have reached the end of all things, so far as medical investigation is concerned, I am now more than willing to command all the resources of my refinement of the surgical art.

Dr. A. J. Ochsner, Chicago: I wish to subscribe to the axiomatic statements made by Dr. Blake in regard to the surgical treatment of these patients. There is no doubt but that neurasthenia can be greatly exaggerated or possibly caused by the results of enteroptosis, when these results produce obstruction either to the alimentary canal and interfere with nutrition and cause autointoxication, or when the condition gives rise to obstruction of the ureter, or causes an accumulation of mucus in the gall-bladder, and secondarily causes gall-stones. The relief, after an operation in such cases, even though the neurasthenia was possibly caused by this condition, must be in most cases exceedingly unsatisfactory, and due to two causes. We do not mechanically relieve the condition; no matter how perfect the operation may be, except in a few instances, as, for instance, in draining and suspending the gall-bladder in removing a hydronephrotic kidney. Dr. Reynolds' presentation is along the line of observations I have made and which caused me to suggest prophylaxis rather than treatment in this way. Many years ago, in studying the treatment of hernia in children, I found that they were cured spontaneously, provided conditions were secured in which there was absence of abnormal intra-abdominal pressure and traction, by placing these children in a position with the foot of the bed elevated at from 15 to 30 degrees. I found that in children with pendulous bellies the recti muscles came together if they were shortened, that the oblique muscles were strengthened, and that the intestines, instead of hanging at the bottom of the pelvis, after a few months' treatment would be in normal position. I found that this enteroptosis had resulted from improper feeding, from gaseous distention, and from other sources of abnormal intra-abdominal pressure. In some of the cases the increased abdominal pressure was due to severe straining from constipation, and with the relief of this the enteroptosis was decreased to a marked extent. I believe that by overcoming the causes of enteroptosis in children, we will prevent its occurrence in many adults.

Dr. Howard A. Kelly, Baltimore: I am convinced from the conclusive demonstration of Dr. Clark, Dr. Richardson and Dr. Lovett, that they have found the key to some of the underlying causes of these conditions, and that rational therapy is to be adopted on such general and orthopedic lines as they have outlined. I shall restrict my remarks to the various types of nervous systems associated with movable kidney.

Movable kidney is frequently found in neurasthenics. Movable kidney, associated with renal pain, may exist to such a marked extent as to bring on the neurasthenic state. The symptoms connected with movable kidney sufficient to justify operative procedure, are, as a rule, definite, and of a local mechanical nature. Psychotherapy is of little use as an adjuvant in treating neurasthenics and in relieving either local or general ptoses so long as a displacement of the kidney persists. On the other hand, psychotherapy and other forms of treatment which aim at building up the patient's general condition may seemingly effect a cure. In an analysis of 245 patients with nephroptosis, 78 or 31.4 per cent. had neurasthenia of varying degrees. I never operate on neurasthenic patients without definite local symptoms.

Dr. Willis G. Macdonald, Albany: Not all patients who suffer from ptsoses are neurasthenic. A large proportion of them do not present symptoms. In a number of these cases of neurasthenia associated with ptoses the responsible conditions are autointoxication from the intestinal tract and peripheral irritations from movable organs. I divide patients suffering from neurasthenia and ptoses into two classes. In the first class, we have those patients who travel from rest cure to rest cure, from one climate to another, and who are battle-scarred from their conflict with surgery. For this class surgery has no potency. There is no hope for relief from surgical intervention in such cases. On the other hand, there is a considerable group of cases in which the condition can be traced to an overloaded cecum and sigmoid—a constant filling of the intestinal tube, with a large, dilated myasthenic stomach lying on the symphysis pubis. Operation will relieve successfully a large number of such patients; yet unfortunately our clinical methods are not sufficient to determine always just which patients will be favorably influenced by surgical intervention and which will not, and in making statements to physicians and friends of such patients we should, as a matter of common honesty, express some doubt as to the ultimate results in this particular class of cases.

Dr. John K. Mitchell, Philadelphia: The whole causation of neurasthenia seems to be bound up in a kind of vicious circle where one symptom produces another until one positively cannot disentangle the chain. What do we know about the normal relations of the abdominal organs? What do we know about the position in which the various organs in the belly ought to be in the ordinary upright posture which we maintain a large part of the time? How much mobility should such organs as the kidney and liver have? Apparently, from the manner in which the intestines are distributed in the belly, they are not placed there like articles on a shelf to be maintained in one position, but they possess a certain amount of mobility. I see few neurasthenics in whom the kidney does not have more or less play, and slightly movable kidneys sometimes give worse symptoms and cause more trouble than freely movable ones, and a floating kidney, unless it results in a twisting of the ureter and stoppage of flow of urine, causing pain in the ureter and in other portions of that neighborhood, does not produce so much symptoms as the kidney that is only slightly movable, one in which it would be difficult for the surgeon to determine whether it is movable or not. Before operating on a neurasthenic patient the surgeon should have a definite idea as to whether or not a pathologic condition exists, what he is going to do and what he hopes to accomplish by the operation; otherwise the results from surgical intervention will be unsatisfactory.

Dr. William J. Mayo, Rochester, Minn.: I agree with Dr. Clark that the patients we have under discussion are wrong from the beginning, and my own feeling is that but a small number of them should be treated surgically. For some years at Rochester we have made a careful examination of all patients who presented themselves, no matter whether they had cancer of the breast or gall-stones, or what not, and to our surprise we find that about 25 per cent. of the women had retroposition of the uterus. We did not find that retroposition of the uterus was more frequent in the latter decades of life. Even young girls who came to us, in whom pelvic examinations were made through the rectum, had retroversion of the uterus in about the same proportion of cases as those women who had reached the menopause. Again, we found that 20 per cent. of the patients who came to us had movable kidney, and a very large majority of them did not have any symptom whatever. I think the neurasthenics, from a surgical standpoint, should be treated like the insane, in that we should take no cognizance whatever of their general complaints, but if they have sufficient local pathology to warrant operation we should operate on them, as we have no right to deny them the relief that comes from surgery. Doubtless many of these patients would be benefited by the Emmanuel movement or by Christian science, and many of us would gladly turn them over to a Christian scientist if we were convinced that the Christian scientists were really Christians, because it takes a Christian to handle these patients.

FLORIDA MEDICAL ASSOCIATION

Thirty-seventh Annual Session, held at Jacksonville, April 6-8, 1910

(Concluded from page 1632)

Diagnosis, Clinical Types and Treatment of Uncinariasis

Dr. D. L. McSwain, Arcadia, discussed in his paper particularly those marginal cases of uncinariasis which are easily mistaken for other diseases, resembling many times acute malaria; those cases complicated with malaria; the value of the stethoscope in diagnosis; the danger from pulmonary edema following the administration of thymol in acute nephritic cases. An infant 11 months old, with no history of ground-itch, four months previous to treatment showed indications of anemia accompanied by occasional ileo-colitis. Microscopic examination for uncinaria ova was negative. With the aid of the stethoscope a diagnosis of uncinariasis was made. Hemoglobin less than 15 per cent., respirations 80 to 100 per minute. Three courses of thymol were given and at the end of six weeks the child was normal. A point of interest under the head of prophylaxis that should be settled by the pathologist is whether the *Uncinaria radiata* produces in the human the local manifestation of the disease, and if so, whether or not it is carried to the intestines, producing the systemic symptoms. It is a well known fact to every one who spent his childhood in the country that about cow lots is the greatest danger of becoming infected with ground itch.

DISCUSSION

MR. RAMSEUR, Ph. G.: In the infant of 6 months, what was the source of infection by hookworms?

DR. D. L. MCSWAIN, Arcadia: In my opinion the infection was acquired by the child crawling on the floor. In the family where this case occurred the grandfather was sixty-five years old and the entire family were hookworm sufferers. I don't think for a moment that ground itch is the only source of infestation. There are too many evidences that it is not so.

DR. HIRAM BYRD, Jacksonville: A feature of the case cited especially interesting was the fact that it did not show any evidence of hookworm on microscopic examination. When we remember that the larva finds its way into the intestinal tract either directly or through the circulation it is from six to ten days before the eggs appear in the stools. I wonder if that is not an adequate explanation of the absence of ova in an acute case of hookworm infestation.

Occurrence of Intestinal Parasitic Infections Among the White Patients at the Florida Hospital for the Insane

DR. RALPH N. GREENE, Chief Physician, Florida Hospital for the Insane, Chattahoochee, reported in his paper, that "among 220 white men there were found 92 cases of uncinariasis, or a percentage of nearly 42. The 187 women examined showed a total of 87 cases of hookworm infection, or a percentage of nearly 47. Four per cent. more women than men show hookworm infection in this series. These results show for the total number of cases in the white departments of the hospital, a percentage of nearly 44. . . . It may not be inappropriate to state that 42 cases not showing hookworm infection, or a percentage of even ten, were infected with other forms of intestinal parasites, namely, *Trichocephalus trichiurius*, *Oxyurius vermicularis*, and *Ascaris lumbricoides*. Taking these other forms of intestinal parasites into consideration, in the computation of percentages, would reveal the surprising result that among the 407 cases examined, were found 221 cases of intestinal worm infection, or a percentage of 54. Roundworms were found associated with hookworms in two cases, one of these being in each sex. *Trichocephalus dispar* infection was noted with uncinariasis in 26 cases; sixteen among the women and 10 among the men. Triple infection was noted in three cases, all of whom were men, the parasites present being *Uncinaria americana*, *Ascaris lumbricoides* and *Trichocephalus trichiurius*. . . . Among the patients in this series are noted an actor, mechanic, housewife, educator, farmer, congenital deficient and several graduates from leading colleges and universities. . . . Cases are to be found in the different types of insanities, from the lowest to the highest form of psychosis. The congenital idiot, the simple dement, the precocious dement, the senile dement, manial-depressive cases, the morphinomaniac, the paretic and the paranoiac, all show a fairly equal distribution of the infection. It has been noted among the cases infected that no matter what the form of mental disease may be, depression exists, and those cases which ordinarily should show evidences of excitability and elation, are depressed and melancholy."

A Plea for a More Vigorous Campaign Against Malaria

DR. GRAHAM E. HENSON, Crescent City, under the above title, addressed the Association with a desire to "stimulate an interest that will result in a decrease of the scourge that constitutes such a large percentage of the morbidity in our Southern states." The education of the public, the destruction of the mosquito in larval and adult stages, the prevention of the development of the plasmodium in man, and the entire eradication of the parasite from an infected blood stream with isolation of the individual in so far as possible, were the classified prophylactic measures and methods stated as being necessary in a campaign to stamp out the infection.

DISCUSSION

DR. J. H. PIERPONT, Pensacola: In regard to the destruction of mosquitoes: During the yellow fever epidemic at Pensacola in 1905 I was city health officer and war was waged against the mosquito, primarily, of course, to stop the yellow fever. We found mosquitoes breeding in every conceivable place: little cups of water in the trees; in vases of broken crockery used in cemeteries for flowers; in roof gutters where limbs of trees had fallen and made dams, and only a few teaspoonfuls of water were necessary to breed many mosquitoes. We could find them everywhere. The war against them was waged successfully. That fall we destroyed practically all the mosquitoes and breeding-places in Pensacola. The city had charge of the work. We oiled large pools of water. In the ensuing summer Pensacola was practically free of mosquitoes. The people who had screened their houses the summer before and who screened them the next summr, who had mosquito bars put in in great numbers, in the middle of the summer of 1906 found no need for them. The screening around many of the porches was removed. But I am sorry and ashamed to speak of the blunder made in the following years in not continuing the work. Only $200 a year would be necessary to keep Pensacola free from mosquitoes; the city was urged to make the appropriation, and I urged it, but nothing was done. The next year (1907) we had mosquitoes, and there are more now. We had no malarial fever during the yellow fever epidemic, nor within the following two or three years, but it is now beginning to show up in the city and suburbs.

SYMPOSIUM ON PELLAGRA

DR. J. H. RANDOLPH, Tallahassee: "The Nervous and Mental Symptoms of Pellagrins and What Can Be Done for Them."

DRS. G. J. WINTHROP and H. P. COLE, Mobile, Ala. (by invitation): "The Value of Transfusion in Pellagra."

DR. RAYMOND C. TURCK, Jacksonville: "Pellagra Complicating a Laparotomy."

DR. G. J. WINTHROP presented the conclusions of himself and Dr. Cole based on studies by Lombroso, Babes, Tizzoni, Antonini and Gatti, and Marianni, that (1) Pellagra is an intoxication; (2) the toxic principles of pellagra exist in the blood of pellagrins and will produce pellagrous symptoms when transferred to other animals; (3) pellagrous serum exhibits definite precipitative, hemolytic and antitoxic properties; (4) an active immunity exists in cured pellagrins and an immunity can be artificially produced in animals.

"Our employment of transfusion in pellagra followed a series of laboratory experiments on blood transfusion in surgical shock in animals and was undertaken with the idea of combating the severe anemia noted in terminal pellagra cases and perhaps of transferring specific antibodies. The results obtained in this first transfusion, performed at the Mt. Vernon Hospital for the Insane, were so gratifying that we were led to try its value in other cases. The histories of twelve cases so far transfused are briefly cited. We would note that in a number of these cases we have been unable to secure donors recovered from pellagra, and healthy individuals, usually close relatives, have been employed. We believe that these non-pellagrous donors, chosen from individuals living under the same environment, eating the same food, and subject to the same possibilities of contagion, probably possess a certain amount of natural or acquired immunity.

"Of the 12 cases transfused six are dead and six are apparently recovered for periods of from five to twenty months. It must be considered that in these transfused cases every possible medical measure had been fully tried, and only continued downward course finally impelled transfusion. A mortality of 50 per cent. in such cases we consider low. It may be noted that of the six fatal cases three were evidently hopeless before transfusion. The seemingly remarkable results obtained in some cases have led us to attempt the operation in all cases, even though considered hopeless. We believe that earlier employment of transfusion would yield decidedly better results, at least it would furnish more reliable data on which to base an opinion as to the true value of transfusion.

"Feeling that transfusion is as yet in an experimental stage, we make no claim as to its final value. Our clinical and experimental experience suggests the following conclusions:

"1. A serum therapy will finally be established in pellagra. Until the perfection of this serum therapy transfusion may be offered to combat the existing anemia and possibly may be the means of transferring a degree of natural or acquired immunity.

"2. In certain selected cases, not benefited by medicinal agents, transfusion has been followed by immediate temporary and possibly permanent recovery.

"3. Without a thorough knowledge of the technic and dangers of the operation, or if the procedure is applied without careful selection of cases and donors, it will certainly be brought into an undeserved ill repute."

DISCUSSION

Dr. G. L. Winthrop, Mobile: In a large number of cases the nervous manifestations seem to appear first. With the average case I believe the extraordinary intestinal symptoms first show, then the characteristic dermatitis and then the terminal stage of the disease showing the poisoning of the nerve cells themselves. In a certain number of cases nervous symptoms do show first and prior to the characteristic dermatitis. In these cases I think we should observe particular care in diagnosis. In the early cases where the patient has been gradually losing strength and weight for a month or more these nervous symptoms may be neurasthenic. I have noticed one particularly in which the patient, a woman, was sent to us as a possible pellagrin. The nervous symptoms were present. She was treated first as a purely neurasthenic or nervous patient and confined to bed for a while, but one morning she was put on the porch for the fresh air treatment and was exposed to the direct rays of the sun; the next morning there was noticed on the dorsal surface of the hand the characteristic dermatitis, the earliest eruption in pellagra I had seen. That made us rather positive of the diagnosis, and shortly afterward she developed other typical symptoms of the disease. All of our cases exhibited nervous symptoms. Attention has been called to the number of cases which are called *sine* pellagra; that is, without the pellagrous eruption. I believe there are cases which we should diagnose pellagra without the typical secondary symptoms, the nervous symptoms or the extraordinary intestinal symptoms. Particularly in those case which have been confined to the house and not exposed to the direct rays of the sunlight which seems to be necessary to bring out this pellagrous dermatitis. I believe that if we observe these cases which come to us showing nervous manifestations first we will be able to show that a large number of them are cases of true pellagra and not cases of that indefinite neurasthenic diagnosis.

Dr. R. L. Harris, Jacksonville: I had occasion to examine a patient the other day, over the abdomen, and breast, and found a number of brown, distinct spots; the woman was afraid of pellagra. These spots had been appearing for years: none have disappeared; she is absolutely well, not nervous, no intestinal symptoms. What is thought about this development?

Dr. J. H. Randolph, Chattahoochee: Without other symptoms, I would not feel justified in making a diagnosis of pellagra in that case. I think it better to look for some other explanation of the condition. Dr. Turck's paper was interesting to me because of the question of operations among the insane. It is a question that has agitated the mind of those having the care of the insane, more or less, at different times, and I feel that it probably shows the utility of resorting to operations to those presenting symptoms, with the hope of effecting relief from harmful abdominal or pelvic disorders. Cases have occurred in which such operations have been of good effect and the symptoms found to be quite resistent to any other means of relief. Some one has asked me whether in these cases of transfusion it is customary to operate more than once. Some of the cases which did not have such favorable results apparently gave variable symptoms after the first operation, and the question naturally arises whether further operative procedure was taken with the view of adding to the benefits already derived. I go a little further than Dr. Winthrop and am inclined to think that these nervous symptoms are almost always among the first presented. The treatment by transfusion appeals to me as the treatment *par excellence* in such cases, not only in the later stages, which, as I have said, is the only procedure of benefit, but in the earlier stages. Of course, I feel we should appreciate the fact that it is an operation or procedure which should not be undertaken by inexperienced hands.

Dr. G. J. Winthrop, Mobile: In two cases referred to in my paper, one, a male, aged 42, very little blood transfused, showed slight improvement, but this did not continue and patient died a month later. The other, a woman, aged 22, showed some improvement after first transfusion. We did second transfusion because we believed she had not received a sufficient quantity of blood. At the time of the second operation some time had intervened and her condition was such that we noted no improvement afterward. Very few of the patients have been transfused more than once, because the cases were so severe when we saw them that they either began to improve in a few days or were in such condition that transfusion absolutely afforded no help. On several occasions there has been marked edema after the operation. In the cases in which improvement was noticed by gain in weight, there was a disappearance of anemia and general better attitude of the patient. We have found that unless this change for the better takes place within the first week, that the case usually goes on to fatal termination. The question of donors has given no end of trouble. When only a few patients recover from the disease out of a large number, it is difficult to get donors. At present we have but two cured individuals who act as donors and we have nearly used up the strain from these patients and have to go elsewhere for blood. Usually relatives of the patients do as well. We undertake the operation willingly with healthy adults, being careful of the history of other communicable diseases, and have found the results in those cases to be very good. Transfusion in pellagra is in the experimental stage. We make no positive claims for the operation. We intend following up the subject and whatever conclusions we come to will be given to the profession and we will acknowledge publicly either the mistake or the success of the transfusion method.

Dr. J. H. Colson: I wish to mention a case which might perhaps throw some light on the etiology of pellagra. We have had some interesting discussions on hookworm disease, and I refer to that in order to convey the idea that I wish to express in this instance. About a year ago a German, aged 20, from a poor family, poorly nourished, hygienic conditions bad, was placed in the hospital. When I first saw the boy he was anemic, abdomen distended, edematous. I thought he had Bright's disease. His urine was tested for albumin with negative results. A microscopic examination revealed nothing of consequence. I next thought of uncinariasis and put him on treatment for that. He responded readily and began to improve materially. After I had given two or three courses of hookworm treatment, I put him on a supporting tonic. Color began to return, his strength increased, and he was discharged in six weeks as cured. He could take care of himself and do considerable light work incident to farm life. He was out of the hospital only a short while when he developed an eruption on his hand, back of his neck and face; in fact, on all surfaces exposed to the sunlight, very much like a burn of the first degree. That condition prevailed for some days and became intensified, and his color changed to more of a dark or leathery tint. After a month or six weeks' treatment, he again became normal. What was this eruption? I was of the opinion that it might be a kindred disease to pellagra. Will hookworm disease superinduce pellagra or will it be a contributing factor in the disease? I simply state this to show that in my experience hookworm disease and pellagra may be associated or that the two can exist simultaneously. There is no question in my mind but that this was a case of pellagra associated with hookworms. There were no nervous symptoms to any noticeable extent.

Dr. J. H. Randolph, Chattahoochee: I think Dr. Colson is on the right line. At the Hospital for the Insane we have made a similar diagnosis of a case of pellagra associated with hookworm disease. Many of us no doubt have failed to recognize pellagra in the past. The reference to sunburned condition recalls some cases reported at the Illinois State Hospital. I heard an address at the Pellagra Conference last fall in which the physician in charge there spoke of a condition existing among his patients and having not recognized it he first attributed it to burns for which he had discharged several of his hospital attendants, thinking they had been careless with the patients. Particular remedies applied in the early stages of pellagra bring magnificent results; whereas, if it is left until the last stages there are no such good results.

Dr. E. Porter Webb, Ponce de Leon: Less than two years ago a patient came from Alabama to my office in the western part of the state, showing typical symptoms of hookworm disease. I put him on treatment and rid him of uncinaria, but in about a month he too had developed a case similar to what Dr. Colson reported; hands and face appeared as if burned, or as if iodin had been used on them; in fact, all surfaces exposed to the sun were in this condition. He had been kept in the house for a while, and then when he got outside this eruption developed. Not being acquainted with pellagra, I made no diagnosis, and the patient died. It seems that pellagra is inclined to follow hookworm disease.

Dr. Hiram Byrd, Jacksonville: To some extent transfusion has been employed elsewhere, and it seems a thoroughly rational method of treatment; probably when we arrive at a complete and satisfactory method, it will be in that direction. If not, some light will have been thrown on the subject nevertheless, and we will be aided in reaching the disease. But the phase of pellagra which is perhaps most interesting and on which most people keep silent, is the etiology. While the cornbread theory has popped up all over the country, still I fear it has put the profession in a wrong light before the people in general. There had been enough said about cornbread and pellagra in the public press and in a general way to give everybody the one idea, or to give the laity, with few exceptions, the idea that the whole medical profession attributes pellagra to the use of cornbread. So far as I understand, at the present time the evidence is totally inadequate to fix the etiology in any direction, and I think it is a serious mistake for the medical profession to commit itself at the present time to any theory. There is no conclusive evidence in that direction, and it appeals to me as a mistake which may have to be regretted and one which we may have to back down from.

Dr. G. J. Winthrop, Mobile, Ala.: Lavinder, in one of the publications of the U. S. Public Health and Marine-Hospital Service, has, I believe, rather concisely stated the existing theories as to etiology. He accepts the old classification, the broad one, of two groups: the zeists and antizeists; one claiming a definite relation between Indian corn and pellagra; the other denying this connection and believing that pellagra is simply a symptom-complex occurring in various alcoholics, insane persons and chronic diseases. I cannot but believe that Indian corn bears some relation to pellagra, and I believe that the general opinion of the country is in favor of some relation between Indian corn and pellagra. The work of the Illinois State Board of Health along this line promises a great deal of good. They went to work in a scientific manner, worked on it a number of months during the summer season, made careful blood examinations, examined the supplies of corn, and out of this came the conclusion that Indian corn bears some relation to the disease. I gather from some correspondence with the Italian physicians that there is a feeling among them that pellagra is a specific infection due to some microscopic organism, probably. I agree with Dr. Byrd, however, that the cornbread theory cannot be positively accepted now. I have had one or two patients who positively deny eating cornbread at all. One was a boy of 8, a definite case, with eruption on the dorsum of both hands, severe stomatitis and diarrhea; he had the disease three years. In Mexico, where cornbread is very common as an article of food and pellagra is almost unknown, the people keep the cornmeal in ovens before eating, thereby killing any organism present. In Italy ovens have been established where the disease is more prevalent, and a decrease in the number of cases is claimed since this method has been instituted.

Dr. Hiram Byrd, Jacksonville: Dr. Louis W. Sambon has recently presented evidence that to his mind excludes corn having anything to do with pellagra. A committee was appointed by the British Medical Association, composed of such men as Lauder Brunton, William Osler, Patrick Manson, Leishman, Ross, Sanwith, Simpson, Dawson and Williams, to investigate pellagra. After hearing Sambon's discussion of the subject, they passed a resolution that his idea was worthy of consideration, and proceeded to gather funds for investigating the disease. Sambon was appointed to have charge of the work. The investigation is to look into the question of the sand-fly as serving as a transmitter of the disease.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Twelfth Annual Meeting, held at Baltimore, April 26-28, 1910

(Concluded from page 1639)

The Importance of Thorough Teaching of Infectious Diseases of Childhood in the Medical Curriculum

Dr. Clemens F. von Pirquet, Baltimore: The average student leaves our medical schools without having seen many of the infectious diseases of childhood. Several reasons may be assigned for this apparent neglect of a thorough instruction in these diseases. A large number of medical schools have no hospitals of their own in which such teaching can be carried on in a satisfactory manner. Those schools which are more intimately connected with well-equipped hospitals labor under the disadvantage that these institutions do not admit cases of infectious disease. One of the most prominent reasons for this is the expense entailed by a proper care of these cases. Many communities insist that a hospital for infectious diseases ought to be removed from the city limits. This is certainly true of those infectious diseases which do not occur regularly in a community such as plague, cholera, smallpox. But there is absolutely no necessity for this in the case of those infectious diseases which occur constantly, many foci of which still persist within the city limits. Particularly in severe cases of diphtheria is it important to be within as easy reach as possible of the hospital. In the teaching of infectious diseases, we must again make the separation into two main groups. In the one belong the sporadic infections not endemic in a community; in the other, the common infectious diseases. With regard to the former, we must demand of the practitioner that he be well enough acquainted with the usual infectious diseases to realize that a case of such sporadic disease, if he happens to meet it, presents features which do not belong to the common infections. With regard to the teaching of the second group, it is not sufficient to have read the text-books or to have seen as many cases as even a man with a large practice encounters. Only a special training in a hospital for infectious diseases can give the teacher sufficient experience to instruct the student properly. To sum up, we come to the conclusion that the medical student should get a good training in the ordinary infectious diseases of childhood, in order to make the diagnosis with certainty, even in somewhat atypical cases, in order to apply the right therapy, to be able to make a prognosis, and in order to take the proper prophylactic measure; and, finally, in order to distinguish a case of the dangerous, unusual infections which involve a real danger to the community. For this purpose, it is not sufficient for the student to get a theoretical course or to see a case in the dispensary now and then, but he should be taught at the bedside by a teacher who has himself a thorough training in infectious diseases. To this effect wards for the common endemic infections should be attached to the hospitals of the medical schools. From the hygienic standpoint, this is not only not objectionable, but has many advantages. I hope that this body will endorse the importance of these demands, and that the American Medical Association will take up the matter and bring it to the general consideration of the profession.

SYMPOSIUM ON UNCINARIASIS

Introductory Address: Importance of Uncinariasis

Dr. William H. Welch, Baltimore: Both the profession and the laity are interested in this important topic. One of the most remarkable things about the disease is the mode of infection. Even though the parasite is an entozoan it enters the body through the skin. The possibility of infection through the alimentary canal, however, cannot be excluded. In general, the more severe the infection the graver the symptoms, though there are exceptions to this rule. A point of dispute is as to whether or not the anemia of the disease is the result of the suctorial activities of the worm. The Porto Ricans claim that the parasite does not suck blood, but Whipple and others have shown that it does. The toxic theory of the disease is still in a hypothetical stage. The disease has received an odium, especially in the South, making difficult the campaign against its suppression. The work of the Rockefeller Commission, with the establishment of which Dr. Stiles had much to do, will be carried on in large measure through the medium of the local health departments. Success in the fight against the hookworm means a general improvement of living conditions in the South.

General Consideration of Uncinariasis

Dr. Charles W. Stiles, Washington, D. C.: The problem of uncinariasis involves practically the entire public health question in the South. In this country four different races are trying to live side by side—the white, black, yellow and red. It is impossible for four different species of animal to live together in this way. In 15 of the southern states the blacks form 34.44 per cent. of the entire population. In 8 of these states there are 833 blacks to each 1,000 of the whites. The cause of uncinariasis is the *Necator americanus*, on which the title of hookworm was originally bestowed by Fröhlich, who believed that the tail of the worm possesses hooks, though this is not true. In from 80 to 90 per cent. of all cases, and in all of the severe cases, infection takes place through the skin. A small proportion, including especially light cases, are the result of alimentary infection. The worms unquestionably suck blood, although this may not be observed if the cold worm is studied. The toxic theory deserves serious consideration. Among the common symptoms are anemia, prominent abdomen, the characteristic position of the hands due to the drooping of the shoulders, absence of the pubic hair, puffiness under the eyes, etc. The prevalence of the disease in the South is due (1) to the presence of the negro, and (2) to hygienic conditions; 61 per cent. of all the farms investigated in the South have not even a privy. The campaign against the disease must be one of cleaning up and of erecting sanitary closets throughout the South.

Uncinariasis: Its Frequency, Distribution and Importance in North Carolina

Dr. W. S. Rankin, Raleigh, N. C.: Uncinariasis is by far the commonest and most important disease of the South. Of 104 college students examined by Nicholson and Rankin, 52, or 37 per cent., were infected. These students represented 25 counties in the state. In the eastern counties the disease is certainly more severe and probably more frequent than in the western counties. It is most frequent on a soil composed of an upper layer of fine, gray, compact sand with a substratum of clay about 6 or 10 inches below the surface. It is almost entirely absent on a soil of coarse sand, 6 or 8 feet deep. When the two races are together the disease is far more frequent in the white. It is a disease of the barefoot period of life, and rural rather than urban in its distribution. The importance of the disease rests on its frequency and its far-reaching effects. As a direct cause of death in the South, it is rare compared to the number of those who have it. The indirect effect of uncinariasis, however, usually places its victim among those who "rarely die of the disease with which they suffer."

Climatic, Soil and General Conditions in Maryland with Reference to Uncinariasis

Dr. Marshall L. Price, Baltimore, based his paper on an exhaustive study of climatic, soil and hygienic conditions in Maryland, as a result of which he concluded (1) that uncinariasis is not now a prevalent disease in Maryland, and (2) that there is little probability of its becoming so in the future. This Dr. Price attributes especially to the general employment of the sanitary privy, and to the fact that practically all the people wear shoes.

Clinical History and Pathology of Pellagra

Drs. William F. Lockwood, Harvey G. Beck and Caleb W. G. Rohrer, Baltimore: One of the earliest descriptions of the disease was by Thierry in 1775, at which time the disease prevailed in the Asturias in Spain. Later it appeared in France and Italy and at present it is found in almost all the provinces which limit the upper zone of the corn belt in Europe. Owing to the short season, corn is cut unripe and becomes diseased, and the prevalence of pellagra in these localities is attributed to the eating of this affected corn. The disease is also found in certain regions of Africa and South America. Pellagra was first recognized in the United States only a few years ago by Searcy, who reported an epidemic in the insane asylum at Mt. Vernon, Alabama; since then the disease has been found to prevail in a number of southern localities. So far 7 cases have been recognized in Maryland, 4 of which have been treated at the Mercy Hospital and form the basis of this report. Clinically, pellagra is characterized by 3 well-defined groups of symptoms, viz.: (1) gastrointestinal; (2) cutaneous; (3) nervous. The gastrointestinal symptoms are anorexia, nausea and vomiting, burning sensation in epigastrium, diarrhea, stomatitis and salivation. The stomatitis is perhaps the most characteristic of these symptoms. The tongue has been termed the "cardinal" tongue because of its color and diagnostic value. The oral mucous membrane, as well as the anal, shows the same degree of congestion and redness. The most characteristic group of symptoms are the cutaneous. These appear symmetrically as an erythema resembling a simple sunburn on parts exposed, as the dorsa of the hands and the face or on pressure points in bed-ridden patients. Bullæ may form within a few days. The skin becomes dry and rough and assumes a characteristic chocolate color. Exfoliation takes place either in small bran-like scales or large masses of skin which frequently leave bleeding surfaces. After exfoliation the skin remains atrophied and has a smooth and glistening appearance. These lesions usually appear in the spring and frequently pass through all stages successively two or three times. The nervous and psychic symptoms are marked. Mental dulness and apathy are distinctive features. The expression is serious, the memory is poor and the patients are slow to comprehend. Melancholia is common and insanity develops in a considerable number of cases. Vertigo is frequently complained of. Reflexes may be disturbed and the gait affected by degenerative changes in the cervico-dorsal part of the cord. Pain and tactile sense may be entirely lost over the lesion. There are two forms of pellagra described: (a) acute typhoidal, (b) chronic recurrent. The pathology of pellagra is not constant. Different observers have described different pathologic findings. These, however, are usually discussed under three heads: (1) the changes in the intestinal tract; (2) changes in the nervous system; (3) changes in the skin. The changes in the intestinal tract consist of atrophy of the muscular coat, with intense hyperemia and occasionally ulceration. The most constant post-mortem change is alleged to be degeneration of the lateral columns of the spinal cord, most pronounced in the dorsal region. The skin changes are erythematous in type. At first there is congestion, followed later by pigmentation, and finally by desquamation. Our first autopsy showed an additional feature, namely, the presence of granulomatous bodies in the walls of the superficial blood vessels of the lungs and brain, and also in the stomach, intestines, spleen, kidney and uterus.

The Soy Bean as a Food in Diabetes

Drs. Julius Friedenwald and John Ruhräh, Baltimore: The soy bean (*Glycine hispida*), sometimes incorrectly called the soja bean, is an annual leguminous plant which originally grew in a wild state from Cochin China to the south of Japan and to Java. The soy bean has been known in the United States for many years, but until the last 15 or 20 years, only as a curiosity. A full account of the plant will be found in Farmers' Bulletin No. 58 of the U. S. Dept. Agriculture, and of the different varieties in the Bureau of Plant Industry Bulletin No. 98. The bean has been put to many uses. The yellow variety, grown in America, has the following composition: Water, 10.13 per cent.; protein, 34.63 per cent.; fat, 17.98 per cent.; nitrogen free extract. 30.50 per cent.; fiber. 3.69 per cent.; ash. 3.07 per cent. The most striking thing about the bean is the fact that it contains no starch. or, at least, a very small quantity, which is strange when one considers that it resembles the various beans very closely and that all other varieties of beans are extremely rich in starchy materials. The fact that the soy bean contains little or no starch suggests its use in certain diseases. One of us (Ruhräh) has already called attention to the use of the bean in infant feeding. It may be prepared in the form of gruel flour, gruels, broths, muffins, etc. In the eight cases of diabetes which we report the patients were placed first, on an unlimited diet, second, on the usual diabetic diet, third, on the usual diabetic diet together with the soy bean, the latter replacing largely the gluten or wheat bread. The percentage of sugar in the urine in these 8 patients with the 3 different diets, respectively, was as follows: Case 1, 1.5 per cent., 1.1 per cent., 9 per cent.; Case 2, 3.5 per cent., 2.1 per cent., 1.5 per cent.; Case 3, 3.2 per cent., 2.5 per cent., 2 per cent.; Case 4, 3.5 per cent., 2.4 per cent., 2.1 per cent.; Case 5, 2.2 per cent., 0.0 per cent., 0.0 per cent.; Case 6, 4.1 per cent., 3 per cent., 2.5 per cent.; Case 7, 3.8 per cent., 3.1 per cent., 2.6 per cent.; Case 8, 4.3 per cent., 3.4 per cent., 1.9 per cent. We conclude: 1. The soy bean is a valuable addition to the dietary of the diabetic on account of its palatability and the numerous ways in which it can be prepared. 2. The soy bean in some ways causes a reduction in percentage and total quantity of sugar passed in diabetic subjects on the usual dietary restrictions.

Diagnosis of Ulcer of the Stomach and Duodenum by the Roentgen Ray

Drs. Harry Adler and **H. E. Ashbury**, Baltimore: The recognition of ulcer of the stomach and duodenum is always so important and at times so difficult that any method must be welcomed which promises aid in those atypical cases in which the absence of the cardinal symptoms permits only a suspicion or at most a presumption. The finding of blood in the stool, either occult or visible, has proved of great importance, but since even occult blood is often absent for weeks at a time, this means of diagnosis is frequently unavailable. Murdock's orthoform test is usually untrustworthy. Our purpose is simply to call attention to the valuable aid the *x*-ray has furnished in a number of cases. There was little in the literature to aid us. Hemmeter in 1906 spoke of the diagnosis of gastric ulcer by means of the *x*-ray, and referred to successful results in cases of artificial ulcer produced experimentally in dogs and cats. Our method is to give a single dose of bismuth and wait a time sufficient for the stomach to get rid of it, having determined in advance the motility. The picture is taken usually from four to six hours after the bismuth, which is given on an empty stomach. We have not found that the spinal column or ribs interfered with the demonstration. Of the 6 cases we report, 3 were undoubted cases of ulcer clinically; 1 was proved by operation. In 2 the diagnosis could be but presumptive without the *x*-ray examination. In 3 of the cases radiographs were made again, after carrying out ulcer treatment. In 2 the ulcer shadow had disappeared, in 1 it persisted. While the number of cases presented is small, the results are such as to lead us to believe that radioscopy is an extremely valuable aid to diagnosis, second in importance probably only to hematemesis or melena.

Deductions from Ten Years' Experience with Local Anesthesia for the Operative Treatment of Ano-Rectal Affections

Dr. S. G. Gant, New York: This paper was based on an experience with over 2,800 cases of anorectal disease in which local anesthesia had been used.

Indications for and Relative Merits of Appendicostomy, Appendicocecostomy, Cecostomy, and Cecostomy with a Provision for Irrigating Both the Large and Small Intestine

Dr. S. G. Gant, New York, after an exhaustive consideration of these various operations, laid especial stress on his method of performing cecostomy, with a provision for irrigating both the large and small intestine. The apparatus used in this method was exhibited

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

A National Department of Public Health

Since the last mention in this department the following bodies have passed resolutions endorsing the principles of the Owen bill (S. 6049) providing for a department of public health:

Ripley County (Ind.) Medical Society.
Columbia County (Pa.) Medical Society.
Lawrence County (Pa.) Medical Society.
Marion County (Iowa) Medical Society.
Gentry County (Mo.) Medical Society.
Washoe County (Nev.) Medical Society.
Winona County (Minn.) Medical Society.
Rutherford County (Tenn.) Medical Society.
Larimer County (Colo.) Medical Society.
Grafton County (N. H.) Medical Society.
Schenectady County (N. Y.) Medical Society.
Essex County (N. J.) Medical Society.
Worcester District (Mass.) Medical Society.
Wabash County (Ill.) Medical Society.
Nodaway County (Mo.) Medical Society.
Southeast Missouri Medical Association.
Tipton County (Ind.) Medical Society.
Camden County (N. J.) Medical Society.
Middlesex South District (Mass.) Medical Society.
Oklahoma County (Okla.) Medical Society.
Jefferson County (Ill.) Medical Society.
Parker-Palo-Pinto County (Texas) Medical Society.
Mercer County (Ill.) Medical Society.
Northern Iowa Medical Society.
Dekalb County (Tenn.) Medical Society.
Dover (N. H.) Medical Society.
Defiance County (Ohio) Medical Society.
Cass County (Ind.) Medical Society.
Nye County (Nev.) Medical Society.
Jefferson County (Ala.) Medical Society.
Philadelphia County (Pa.) Medical Society.
Genesee County (Mich.) Medical Society.
Washington County (Ill.) Medical Society.
Mahoning (Pa.) Presbyterian Men's Club.
New Hampshire Conference on Charities and Corrections.
Public Meeting of Citizens of Sydney, Ohio.
Physicians of Mandan, N. Dak.
Public Meeting of Citizens of Aledo, Ill.
Detroit Board of Commerce.
Oklahoma City Chamber of Commerce.
Physicians of Mason City, Iowa.
Citizens of Albany, Mo.
Citizens of Leadville, Colo.
Odd Fellows of Leadville, Colo.
Leadville (Colo.) Improvement Association.

NEWSPAPER COMMENTS

The following are a few of the editorial comments received:

The Natchez *News* says: "It needs no full elaboration of arguments to show that the health of approximately one hundred million inhabitants of the country is of equal importance with that of other matters of administration by the several departments. Laws as to sanitation, hygiene, prevention of disease, handling of epidemics, etc., can be carried out more successfully when the different bureaus now scattered in the several departments are consolidated into one in charge of a cabinet officer. . . . That the agricultural and industrial development of the country is possible only when the health of the country is good and that unnecessary waste of life and health are as injurious as the wasteful abuse of material resources is readily admitted by all. There is no doubt that if the bill is given careful consideration it will ere long become a law, to the lasting benefit of the country."

The Bellingham (Wash.) *Sunday Herald* says editorially: "Of all the plans of doctors and laymen none has in it greater merit and promise than that proposed by Senator Owen for the creation of a national department of public health. . . . We have been wasteful of our greatest national asset, the health of the nation, as we have been wasteful of our great natural resources. It is time to stop and take count—to notice what price we are paying—to see whether industrial supremacy is not costing too much, not only in wasted lives and in needless sorry and [illegible] ld, bare dollars and cents. It is a case not [illegible] and theorizing but for hard common sense [illegible] of such knowledge as we now have. Every public health officer in the land, from the official in whose keeping is the health of the smallest town to the commissioners of health of our greatest states, should be able to turn to a full-fledged, properly equipped and widely experienced department in Washington for advice, support and relief. In many cases the health of whole communities is now endangered for lack of a central department able to advise with authority and of sufficient prestige to have its requests listened to with attention. . . . As the national Department of Agriculture has been of incalculable benefit to the farmer and the state departments of agriculture, so will a national department of health help the state and municipal governments to carry into every household and factory in the land the new gospel of fresh air, of decent housing, of factory legislation and of wages sufficient to enable the wage earner to maintain what we regard as an American standard of comfort. Senator Owen has performed a great public service in proposing this first adequate solution of our difficulties. If Congress would realize the change that has taken place in public sentiment during the last few years and the weight of the public demand for this bill, of which evidences are at hand at every turn, it is possible that congressmen would hasten at the present session to heed the wishes and united demand for a thoroughgoing reform of our outgrown and inadequate public health ligislation."

The Flint (Mich.) *Journal* says: "We must agree that it is quite as necessary to save men, women and children as pigs, lambs and goats, yet our national expression, disclosed in the present cabinet arrangements, would hardly indicate this to be true. It is not so long ago that Michigan passed through a siege of foot and mouth disease, at which time several cases of suspected animals were placed in quarantine in Wayne county. Immediately an embargo was placed on the entire state and the shipment of live stock of all kinds prohibited for a period of thirty days. There is no doubt but that action is quick and prompt and effective under federal control, as was evidenced in this case. But consumptives are still passing up and down our highways, coughing up their sputum, to await a favorable opportunity on pavement or street to be picked up in a whirling cloud of dust and carried into the noses and mouths of innocent victims. . . . Uniform regulation is of as much importance in matters of health, surely, as in railroad control or legal decisions. A department like the one in contemplation could gather accurate data on all questions of health and sanitation throughout the entire country and conditions and causes regarding all diseases could be carefully studied with the end in view that the chief causes of preventable diseases and unnecessary ill health could be established and the information widely distributed."

The Garland (Utah) *Globe* says: "The establishment of a department to carry on a war against the ravages of preventable diseases would be a godsend to the nation. . . . If this bill should fail to become a law the people would be to blame. . . . Let us unite in asking our legislators to vote for the passage of the bill. We have a Department of Agriculture that looks after the lives and health of plants and animals—why not have a national department of health to aid in saving the lives of the people?"

Resolutions on Optometry

The following resolution was adopted at a meeting of the American Ophthalmological Society, May 4:

WHEREAS, The American Ophthalmological Society is strongly opposed to the so-called "optometry" bills, which are now being brought before our state legislatures; and

WHEREAS, This legislation is unnecessary, unwise and involves a lowering of medical standards; and

WHEREAS, There can be no compromise with its advocates from the medical profession.

Resolved, That if opticians must be recognized, it should be as opticians, and not under the new name of "optometrists;" that if there must be recognition, it should be legal only, and not medical, and that the medical profession should not lend its sanction by serving on optometry boards, or by taking "optometry" boards under the supervision of state boards of medical registration.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Second Weekly Meeting

HYSTERIA

ETIOLOGY: Age, sex, race, heredity, neuropathic tendencies in antecedents, emotions, trauma, infections and toxic agents. Association with organic disorders, imitation.

SYMPTOMS: A, Stigmata and, B, accidents of hysteria.

STIGMATA: A. Sensory stigmata, (a) anesthesia, cutaneous anesthesia, perversion of taste and smell, diminished hearing, contracted visual field, dyschromatopsia, amblyopia. Distribution of anesthesia, one-half of body, geometrical areas and islets. Movable anesthetic zones. Condition of reflexes in anesthesia. (b) Hyperesthesia. Neuralgic pains. Sensitive areas, clavus, Brodie's joints, tender breasts, etc. Hystogenic zones. B. Motor stigmata. Retarded movements, inco-ordinate movements, weakened voluntary movements, "Diathesis of contracture." C. Mental stigmata. Amnesia, localized, systematized or total, abpulia, suggestibility, simulation.

ACCIDENTS OF HYSTERIA: A. Convulsive attacks; (a) grand attacks, prodromal stage, epileptoid period, period of clownism, of passional attitudes, of delirium; (b) modified attacks, vertiginous, globus, epileptoid, tetanic, ecstatic, syncopal, somnolent or somnambulic attacks. B. Motor accidents. Paralysis, hemiplegia, monoplegia, ptosis, torticollis. Contractures. Astasia abasia. Rhythmical spasms, tremors, tics. C. Sensory accidents, neuralgias, cephalalgias, pseudomeningitis, irritable spine, pseudoangina. D. Visceral accidents, (a) respiratory, aphonia, cough, noises, etc., dyspnea, hemoptysis, (b) digestive, anorexia, dysphagia, vomiting, tympanites, (c) urinary, polyuria, anuria, frequent urination, variations in constituents, (d) trophic and vasomotor, erythema and vesicular rash, bloody tears and sweats, dermographism, edema. Contractures and muscular atrophy. Hysterical breast. Hysterical fever.

Book Notices

SURGERY OF THE BRAIN AND SPINAL CORD. By Prof. Fedor Krause, M.D., Geh. [illegible]ierender Arzt am Augusta Hospital zu Berlin. [illegible] Herman A. Haubold, M.D., Clinical Professor i[illegible] Hospital and New York University Medical College. Vol. I. Pp. 282, with illustrations. Price, $6.00. New York: Rebman Co.

The first portion of this book is devoted to a brief description of the various methods of opening the cranium and of the instruments used for that purpose. The author manifests a distinct preference for the osteoplastic method by use of the Dahlgren forceps (which is of the type known in this country as Devilbis). Emphasis is placed on the dangers of hemorrhage from various structures, and the compression methods of Haidenhain and Kredel for control of scalp hemorrhage, and of crushing and packing for that from the bone, are given preference. The advantages of different methods of opening the posterior fossæ are discussed.

Following the mechanical procedure of exposing the brain, the decription of the surgery of each of the conditions calling for surgical treatment is fully presented. Chronic leptomeningitis, arachnoid cysts and cysts of the brain of various characters and their causes, are considered in order. Naturally, a considerable space is devoted to tumors. The surgery of brain tumors comprises a large part of the real progress made in brain surgery in the last decade. Greater accuracy in diagnosis, and especially in localization, together with the advantages of extensive exposures have made nearly all regions of the brain accessible and many of the heretofore unapproachable lesions are now removable.

The various forms of tumor and conditions involving the meninges and cortex, including tuberculosis and syphilis, are considered, and then follows a lengthy presentation of the surgery of the base of the brain, including that of the pituitary body and the nerves. The various details of operative procedures and of wound treatment are given in minutiæ, and the various possible complications and their prevention and treatment are fully discussed. The indications for and technic of decompression trephining are satisfactorily presented.

One of the shortest and most practical sections of the work, for the general surgeon, is that devoted to closure of large cranial defects. Cranio-cerebral topography and puncture of the brain and ventricles are also considered, and the last chapter is devoted to a very brief consideration of radiography.

The terse, clear and forceful text is illustrated by many drawings and fairly illumined by numerous colored plates, which accurately portray the appearances presented by the various pathologic processes and the operative measures.

American physicians are to be congratulated on being now able to obtain in translation Krause's justly celebrated monograph, in which has been preserved, as far as possible, the author's peculiarly effective method of expression.

A System of Syphilis. Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.D., M.C., F.R.C.S. In Six Volumes Vol. III. With an Introduction by Sir Jonathan Hutchinson, F.R.S. Cloth. Pp. 267, with illustrations. Price, $13.50. New York: Oxford University Press, 1909.

This volume contains 250 pages. In it Osler and Gibson of Oxford write on "Visceral Syphilis:" Mercier of Charing Cross Hospital, London, on "The Clinical Aspects of General Paralysis:" Castellani of Colombo, on "Yaws:", S. B. Atkinson of the Inner Temple, London, on "Medicolegal Aspects of Syphilis:" E. M. Brockbank, London, on "Syphilis and Life Assurance;" Haldin Davis of Paddington Green Children's Hospital, London, on "Serum Diagnosis of Syphilis." This volume is thus distinctly a British statement of the subjects considered; for all of the writers on syphilis are Britons except Osler, and Osler, to our loss, the British have appropriated.

Osler and Gibson's contribution constitutes a good brief monograph on syphilis of the viscera. It gives a summary of our knowledge of this subject, but we miss the complete consideration of the topics which their importance justifies. The subjects, however, are covered fully, if briefly, and with its abundant references to the literature the monograph makes an admirable beginning point for one desiring to make a full study of any topic embraced within its scope. Its value is greatly enhanced by twenty-four very instructive illustrations, those of microscopic objects being in color and beautifully reproduced. Mercier's article on general paralysis is admirable. It is detailed, logically developed, and forms a most readable brochure on the subject.

A chapter is given to yaws. Yaws is not syphilis, but the consideration of yaws in a system of syphilis is pertinent because of the many close relations between the two diseases. The article is by Castellani, who, by virtue of his large experience with the disease in Ceylon and particularly by virtue of his discovery of the *Spirochæta pertenuis* as the specific organism of yaws, is perhaps of all men the one best entitled to write with authority on the subject. The interest of his article is much increased by a large number of illustrations showing the *Spirochæta pertenuis*, experimental yaws in monkeys, primary lesions of yaws in men, and various stages and types of the later lesions of the disease in men. Aside from its interest as one of the important tropical diseases, yaws has a peculiar interest because of its many resemblances to syphilis and Castellani's article is a welcome addition to the volume.

The article on some medicolegal relations of syphilis and on the one on syphilis and life assurance are good. Brockbank's article in particular on syphilis and life assurance is suggestive. It is full, with copious bibliography, and contains a large mass of important facts bearing on the influence of syphilis on life-expectancy. All of his facts indicate that syphilis is an appreciable shortener of life. The last article in the volume is on serum diagnosis by Haldin Davis. His description of the technic is a clear description of a very complicated subject and the article as a whole is satisfactory and up to date.

Taking this volume at large it is a useful statement of our knowledge of the phases of syphilis of which it treats and it can be fully commended.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. Twenty-Eighth Year, 1910. Cloth. Price, $3.50. Pp. 762, with 108 illustrations. New York: E. B. Treat & Co.

This British publication under the editorial supervision of a number of British and American physicians and surgeons corresponds with the year-books published in this country, but is in one volume instead of in separate volumes for various groups of subjects or time of year. The whole field of medicine and surgery is reviewed briefly, more space being given, of course, to the important subjects, and considerable to the newer topics of experimental medicine, with editorial comment, approving or disapproving certain theories, plans of treatment or operative procedures. The book is well illustrated and offers a comprehensive review of the year's work.

Medicolegal

Liability of Employer for Communication of Contagious Disease

The Court of Civil Appeals of Texas says that the case of Mellody vs. Missouri, Kansas and Texas Railway Co., of Texas, 124 S. W. R., 702, was brought to recover damages sustained by the plaintiff through the alleged negligence of the company in permitting one of its section houses to become infected with smallpox, which was communicated to him, destroying his eyesight. That the railway company would be liable for the spread of a contagious disease through the negligence of its servants acting within the scope of their authority, whereby another was injured as the proximate result of such negligence, was not at all questioned.

At the section house referred to, the plaintiff's father, a section foreman, resided with his family, and one Bryers, another section foreman, boarded. Bryers, it appeared, had gone to Palestine at the time there was an epidemic of what was called "black measles" in the city, talked at a distance of some 50 feet through an open window to his wife, who was quarantined, and arranged to take away their child, who was at another house some 50 feet away, obtaining for both himself and child health certificates from the city health officer. While on the train his child went near another one, whose mother said it had fever, and, as she had but recently lost her husband as a result of black measles, she feared the little one was afflicted in the same way. After being advised of this, Bryers did not permit his boy to go near the sick child any more. Some 15 days after he was brought to the section house he was taken sick with what proved to be smallpox, and it was learned that his mother died of smallpox. Two or three days after the boy was taken sick the roadmaster was at the section house, and the circumstances under which the boy was obtained, etc., were explained to him. Under such circumstances, the court does not consider that there was any liability on the part of the company in these cases.

A careful examination of all the testimony utterly failed, it says, to show actionable negligence on the part of either Bryers or the roadmaster in respect to placing or allowing Bryers' child to remain in the section house until its death, and therefore the railway company could not be required to respond in damages for the injuries sustained by the plaintiff on account of the house becoming infected with smallpox by the presence of Bryers' afflicted child, or because said disease may have been communicated to the plaintiff by actual contact with said child. Clearly, Bryers was not acting within the scope of his authority so as to bind the company up to the time of placing his child in the section house, and, in permitting the child to remain therein the short time which elapsed from the time he discovered the child was probably afflicted with smallpox and the time of its death, he could not fairly be charged with a failure to do what an ordinarily prudent person would have done under the circumstances of the situation.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

May 5

1 *Exophthalmic Goiter. W. H. Robey, Boston.
2 *Recent Advances in Treatment of Exophthalmic Goiter. C. Frothingham, Boston.
3 *Need of Instruction and Experience in Nursing as Part of Medical Education. F. P. Denny, Brookline, Mass.
4 Physiology Versus Anatomy. G. V. N. Dearborn, Cambridge, Mass.

1. **Exophthalmic Goiter.**—Robey advises that the patient should be given first the advantage of medical treatment by whatever methods the physician can suggest and the patient has the means to adopt. The physician should, however, keep in close touch with his patient and should be watchful for

constantly increasing benefit from treatment. He should not allow his patient to grow worse nor to stand still in a condition of invalidism without the advice of an experienced surgical adviser and operator. It is unsafe to allow an exophthalmic goiter with distressing symptoms to continue without improvement because the toxemia sometimes exerts a sudden and alarming influence on the heart. Again, persons with well-developed exophthalmic goiter do not stand ordinary intercurrent infections which would hardly trouble a normal individual.

2. **Treatment of Exophthalmic Goiter.**—Frothingham gives a splendid review of all forms of treatment employed in this disease, and asks for more complete statistics. They should, he says, be classified according to the number of years since treatment was instituted. The same authors should compare simple medical treatment with that plus the special forms of treatment, such as operation, serum, etc.

3. ***Instruction in Nursing as Part of Medical Education.***—Attention is called by Denny to the importance of nursing in therapeutics, because ignorance of nursing renders the physician's work less effective. He says that physicians need to have personal experience in nursing in order to prescribe treatment intelligently. His plan is as follows: Experience in nursing could be given men medical students in the male wards of a hospital. The students would do the nursing in the wards, under very careful and close supervision, the expense of the supervision being borne by the students' fees. The discipline should be very strict, military in character and good conduct and good work in the wards would be essential for a medical degree. As few patients as possible should be assigned to each student, so that the service rendered would be individual and personal. The students should be made to feel that they are responsible for the comfort of their patients. A nursing service of at least a month, preferably two months, should be required of each student. A part of the service should include night duty, as conditions are very different at night from the patient's point of view and a physician's knowledge of sickness is incomplete unless he has spent a number of nights at a patient's bedside. Combined with the experience in nursing there should be instruction in the various therapeutic measures which a nurse carries out. It could probably be arranged that most of the students should do their nursing during the summer, just as the engineering students have their "field work" at that time. During his nursing service the student will get closer to his patients than he ever has before or ever will again. Pictures of disease, expressions, posture, types of respiration, knowledge which cannot be obtained from books or lectures become impressed on the student's mind in a way that years of clinics would not do. For training in practical therapeutics, there is nothing in the present course to compare with it. Students will become familiar with the appearance, smell, taste, mode of administration and action of drugs. In no other way can the student so well learn the wealth of simple measures, which in the hands of an intelligent nurse, can be of the greatest comfort; for example, moist and dry heat, cold compresses, ice bags, packs, baths, rubbing, counter-irritants, etc. As a means of learning practical dietetics, this experience would have no equal.

Medical Record, New York

May 7

5 Cellular Activity: The Epitome of Rational Medicine. M. A. Cleaves, New York.
6 Action of Intermittent X-Rays on General Metabolism and Chronic Degenerative Diseases of the Eye. F. R. Cook, New York.
7 The Significance of *Leucorrhea*. A. H. Goelet, New York.
8 Diagnosis of Lesions of the Abdominal Viscera: *Special Ref-*
erence to Their Functional Integrity. H. S. Carter, New York.
9 Streptococcus Infections of the Throat. R. McKinney, Memphis.
10 Abstraction of the *Calcium* Salts of the
in the Blood, *for the Purpose of the*
Organic Acids: Cause of Lipemia in *Diabetes* Mellitus.
J. G. Drennan, Chicago.
11 *Practical Method of Anesthesia for Removal of Enlarged Tonsils and Adenoids and Other Operations on the Head. M. E. Jutte, New York.

11. **Anesthesia for Operations on Head.**—A *wide-mouthed* bottle with a double perforated rubber stopper, which holds two tubes, is used by Jutte. One tube reaches the bottom of the bottle, the other just passing through the stopper. The *long tube is* connected with a double bulb, the short one with a metal mouthpiece, such as is used by dentists. Narcosis is induced by the drop method, until the patient is well under. The metal mouthpiece is hooked around the mouth gag and ether vapor *is forced into the* mouth of the patient by a rubber *bulb. Jutte says that* narcosis can be kept up for a long time.

New York Medical Journal

May 7

12 *The Significance of the Various Enlargements of the Thyroid: Especially Exophthalmic Goiter. C. Beck, New York.
13 Norway for Neurasthenia. C. E. Nammack, New York.
14 Serodiagnosis of Syphilis. V. C. Pedersen, New York.
15 Heredity as a Factor in the Etiology of Tuberculosis. E. L. *Shurley, Detroit.*
16 Interesting Points in Gastrointestinal Surgery. T. C. Witherspoon, Butte, Mont.
17 Fibroid Tumors *Complicating Pregnancy.* E. G. Torrance, Birmingham, Ala.
18 *Where Shall the Pharmacopeia Draw the Line of Demarcation? S. S. Cohen, Philadelphia.

12. Abstracted in The Journal, Oct. 23, 1909, p. 1426.

18. **Revision of Pharmacopeia.**—The Pharmacopeia, says Cohen, is a book of pharmacal standards and neither an advisory nor a minatory work on therapeutics. Admission or rejection should depend on the voice of the whole profession, and not on the voice of teachers or leaders only, whether pharmacologists, clinicians or therapeutists. Many preparations of one drug are permissible, when desired by physicians in general. Many drugs of similar action are permissible and even necessary. Active principles should not displace the crude drug and galenical preparations, unless physicians in general all agree that the active principle is the only necessary or desirable preparation. Monopolization by patent or trademark should not exclude a drug otherwise proper to be admitted. *In the* case of *trademarked names legal advice* should be taken as to the best method of procedure. In the case of process patents and product patents, the effort should be made to use pharmacopeial control and standardization to the mitigation of the evils of high price and uncertainty of product possible under the present bad system. A determined effort should be made to modify the laws of the United States so that in the case of medicines, processes only, and not products, can be patented. Trademarks *can only* be manufacturers' brands, and hence the common name of a medicine cannot be used as such. If this is not good law at *present, it should be made* such by statute.

Medical Fortnightly, St. Louis

April 25

19 *Treatment* of Diseases of Skin Pigmentation. A. S. Ashmead, Canadensis, Pa.
20 Are *Elections* in the American Medical Association and Its Constituent Associations Fair and Legal? G. F. Lydston, Chicago.
21 *Progressive* Muscular Dystrophy of the Juvenile Type. J. M. Bradley, St. Louis.

American Journal of Urology, New York

April

22 Diagnosis of Essential Hematuria. R. L. Rigdon, San Francisco.
23 Acute Fulminating Gangrene of the Penis and Scrotum, with Known Port of Entry, ending Fatally. J. A. Gardner, Buffalo.
24 Influence of Resection of the Kidney on the Function of the Organ: When Kidney *Wound* is Closed by Sutures; When the Kidney Wound is Drained (a) by a Rubber Tube, (b) by Gauze. J. H. Cunningham, Boston.
25 Use of Collargol in Genitourinary Surgery. O. Pasteau, Paris.

Illinois Medical Journal, Springfield

April

26 *Indications for Herniotomy in Inguinal Hernia. E. S. Judd, Rochester, Minn.
27 Bad Nauheim: Its Treatment and Therapeutic Value. J. H. Honan, Berlin, Germany.
28 Recognition of Extrauterine *Pregnancy.* A. M. Miller, Danville.
29 *The Baby-Tent Idea. F. W. *Allin, Chicago.*
30 Diagnosis of Rachitis. J. W. Van Derslice, Chicago.
31 Survey of the International Movement Concerning *Infant* Welfare. I. A. Abt, *Chicago.*
32 Complete Excision of the Tonsil. J. W. Smith, Bloomington.

33 Arteriosclerosis of the Urinary Bladder. G. Kollscher and H. Kraus, Chicago.
34 Vesicovaginal Fistula. C. J. Drueck, Chicago.
35 Nervous Symptoms in Diabetes. L. H. Mettler, Chicago.
36. The Ten-Hour Law. E. Freund, Chicago.
37 Compressed-Air Illness. P. Bassoe, Chicago.

26. **Herniotomy in Inguinal Hernia.**—The simplest and most satisfactory way of treating inguinal hernia in children, according to Judd, is by operation, and the chief indication for performing it is the trouble and consequent anxiety to the mother in caring for the child in this condition. Herniotomy, he says, is the only safe method of treating inguinal hernias in adults. The operation can be done with much better satisfaction and more safety in old people than was formerly believed.

29. **The Baby-Tent Idea.**—The equipment of the tents used in Chicago consists of a hospital tent about 12 by 16 feet, with a double roof, board floor and sides, and screen sides above the chair rail. Each contains 8 iron beds, a hammock, electric lights, 2 electric fans and a telephone. There is also a receiving tent, about the same size, for examining, bathing and temporary care of the baby. Milk-commission milk has been used almost exclusively, as a milk depot was maintained at each tent. The tents are opened about July 1 and closed about September 15. The tents are kept open nights and Sundays only in extreme emergency of either very sick patients, or severely hot weather, to prevent the usual "blue Monday," for it was noted Monday was the worst day of the week. A visiting nurse is in charge of each tent, with one or two assistants. When the work justifies, an intern spends all day at the tent. Every day some physician visits the tent. The arrangements are such that each physician visits a tent twice a week. Only patients under about 2 years of age are received, as those older could not be kept in the beds. Only babies of the poor are taken. When it can be determined through the visiting nurse of the district that the parents are able to pay they are referred to their family physician. A large proportion of these little sufferers are brought in or sent in by the district visiting nurse. When patients fail to return they are investigated by the visiting nurse.

Journal Missouri State Medical Association, St. Louis

April

38 Plea for an Early and More Careful Diagnosis in Joint Tuberculosis in Children. A. O'Reilly, St. Louis.
39 Intestinal Obstruction: Especially Intestinal Paresis. T. E. Potter, St. Joseph.
40 Excision with Immediate Suture Operation for Fistula-in-Ano. E. H. Thrailkill, Kansas City.
41 Dystocia Due to Cesarean Section. G. Gellhorn, St. Louis.
42 Human Tuberculosis Considered from Several Viewpoints. G. Homan, St. Louis.
43 The State Laboratory as a Safeguard to Public Health. G. McConnell, St. Louis.
44 The Early Diagnosis and Surgical Treatment of Cancer of the Stomach. C. R. Dudley, Hannibal.
45 Excision of the Rectum. W. H. Coffey, Kansas City.
46 Ovarian Tumor Complicating Pregnancy: Recovery after Operation. D. Forester, St. Louis.
47 Tumors of the Parotid Gland. F. Reder, St. Louis.
48 The Missouri State Sanatorium. O. H. Brown, St. Louis.
49 Ophthalmologic Experience. B. Pitts, St. Joseph.

Archives of Internal Medicine, Chicago

April

50 *Sexual Forms of Malarial Plasmodia Occurring in the Blood of Man. C. W. Craig, Washington, D. C.
51 The Comparative Value of Vasomotor Drugs in Renal Hemorrhage. C. J. Wiggers, Ann Arbor.
52 *Relation of Typhus Fever (Tabardillo) to Rocky Mountain Spotted Fever. H. T. Ricketts and R. M. Wilder, Chicago.
53 Perforating Ulcer of the Foot in Alcoholic Neuritis. R. M. Van Wart, New Orleans.
54 *Influence of Scopolamin-Morphin Narcosis on Metabolism. F. M. Barnes, Baltimore.
55 Physiologic and Pathologic Effects of Severe Exertion (Marathon Race) on the Circulatory and Renal Systems. J. H. Barach, Pittsburg, Pa.
56 *Protein Metabolism in Pneumonia. C. G. L. Wolf and A. Lambert, New York.

50. **Sexual Forms of Malarial Plasmodia.**—From what is said by Craig regarding the action of quinin on the malarial gametes it is evident that if we thoroughly treat our malarial patients during the initial attack of the disease we shall prevent the formation of these bodies, and, therefore, the transmission of the infection to the mosquito. *A great deal of the* malaria prevalent in every malarial locality is directly traceable to improperly treated patients, and the prophylaxis of the disease will be immensely helped by the thorough treatment of every infection. The practice of regarding such infections as cured because the active symptoms have disappeared is a most common and a most pernicious one and one that is responsible for the transmission of a very large proportion of malarial disease. Every malarial patient, he asserts, should be kept on quinin for at least a week or two after the disappearance of symptoms, and should take the drug, in 10-grain doses, once a week for 2 months after the acute attack.

52. **Typhus and Rocky Mountain Spotted Fever.**—The serum of typhus convalescents drawn within a week to 10 days, after the subsidence of fever, Ricketts and Wilder found did not exert any more protective effect against spotted fever than normal serum does. Also, such serums show little or no more agglutinating effect for the bacilli which appear to be associated with spotted fever than do normal serums. A monkey which had been rendered immune to typhus was not immune to spotted fever. These experiments, the authors believe, substantiate the clinical evidence and that obtained by animal inoculations, that spotted fever and typhus fever are not identical, and they seem also to indicate that the organisms of the two diseases are not closely related biologically, whatever the morphologic conditions may be. The fact also that the serum of a disease (typhus) which is roughly similar to spotted fever, has no unusual agglutinating power for the bacilli mentioned, as compared with the high agglutinating power of immune spotted fever serum, supports the contention that this bacillus bears a causal relation to spotted fever.

54. **Scopolamin-Morphin Narcosis in Metabolism.**—Barnes believes that the points brought out by his observations justify the following conclusions:

1. Scopolamin-morphin when given together in sufficient quantity and when leading to a depression of activities cause a decrease in the absolute amounts of nearly all of the normal constitutents of the urine.
2. Scopolamin alone, when it leads to an elevation of activities, causes an increase of such constituents.
3. The increase or decrease affects all constituents about equally.
4. The effect of both drugs together or of the scopolamin alone is shown transiently not more than 12 hours and perhaps less, and on the day following the administration of the drugs the variation is partly counterbalanced by an increase or decrease, as the case may be.
5. Repeated doses of both drugs together over a long *period* of time will lead to a form of tolerance.
6. The influence on metabolism, as indicated by the variations in the urinary secretion, seems due to an indirect and secondary action of the drugs. The retardation of absorption from the alimentary tract is considered the prime cause for the variations found in the urine during these studies.

56. **Protein Metabolism in Pneumonia.**—Wolf and Lambert examined the nitrogen and sulphur metabolism in 19 cases of pneumonia of varying degrees of severity. They found that the cases of milder type show a smaller loss in nitrogen and sulphur than do those of a more severe grade. The daily loss in nitrogen on a diet adequate to protect a resting individual from nitrogen loss may be from 20 to 25 gm. The relative desamidating capacity, as shown by the ratio of urea nitrogen to total nitrogen, is comparable to that of a normal subject. The capacity for the oxidation of the cystin group, as exhibited by the ration of total sulphate sulphur, is quite as high, if not higher than normal. During the period of hyperpyrexia excessive amounts of creatinin are eliminated. This is followed during convalescence by a subnormal excretion of creatinin. This is taken to indicate the endeavor on the part of the organism to repair the losses sustained during the height of the toxemia.

In the severe cases of pneumonia large amounts of creatin are also excreted. This is seen particularly during the time of greatest nitrogen loss. During convalescence the creatin disappears from the urine. In some of the lethal cases the amount of creatin excreted on the day terminating the illness is as high as the amount of creatinin excreted. During hyperpyrexia, especially in cases severely toxic in type, unusually high amounts of undetermined nitrogen are excreted. In some cases over 5 gm. of nitrogen derived from uninvestigated substances are found in the urine. The nitrogen is not derived from albumoses, as the search for these substances revealed quantities which in no way could account for the large amount of rest nitrogen. The sulphur excretion runs more or less parallel with that of the nitrogen; but it appears in some of the cases that the catabolism of proteins rich in sulphur is not so marked as those in which the content of sulphur is small. On the other hand, cases progressing unfavorably seem to show an excessive destruction of proteins containing much sulphur. This is made out from the increased ratio of total sulphur to total nitrogen.

Iowa Medical Journal, Des Moines

April

57 Etiology, Pathology and Symptomatology of Cholecystitis. E. W. Meis, Sioux City.
58 Complications, Sequelæ and Diagnosis of Cholelithiasis. J. L. Klein, Muscatine.
59 Treatment of Cholelithiasis. C. E. Dakin, Mason City.
60 Malignant Disease of the Biliary Tract. E. H. Robb, Detroit Harbor, Wis.
61 Cerebrospinal Meningitis. G. M. Johnson, Marshalltown.
62 An Epidemic of Infantile Paralysis. J. W. McCreery, Whittemore.
63 Plea for Better Supervision in the Treatment of Acute Exanthemata. C. S. Grant, Iowa City.
64 Plea for the Revival of Venesection. J. H. Schrup, Dubuque.

Western Medical Review, Omaha

April

65 Syphilis of Bone. A. C. Stokes, Omaha.
66 Determination of Eyestrain by the General Practitioner. H. B. Lemere, Omaha.
67 Hematuria. R. R. Hollister.
68 Rubella. F. W. Phifer, Wheatland, Wyo.

United States Naval Bulletin, Washington, D. C.

April

69 The Commissary Department in Naval Hospitals. P. A. Lovering, U. S. Navy.
70 *The Presence of the Lepra Bacillus in the Circulating Blood. G. B. Crow, U. S. Navy.
71 The Finding of Hookworm in American Samoa. P. S. Rossiter, U. S. Navy.
72 Prevention of Venereal Diseases in the Navy. R. Spear, U. S. Navy.
73 Rational Treatment of Arteriosclerosis. C. H. T. Lowndes, U. S. Navy.
74 Treatment of Syphilis at Hot Springs, Ark. W. S. Hoen, U. S. Navy.
75 A Portable Sanitary Scuttle-Butt. E. G. Parker, U. S. Navy.
76 Suggestions for Diet-Kitchen Equipment. S. Wierzbicki, U. S. Navy.
77 Colonic Anesthesia. W. S. Pugh, U. S. Navy.

70. Lepra Bacillus in the Circulating Blood.—After satisfying himself of the diagnostic value of Rosenberger's method of demonstrating the tubercle bacillus in the circulating blood, Crow began an examination of the blood of the patients in the leper colony here in Guam. The technic used is practically that of Rosenberger. Sixteen cases were examined. In 15 the blood contained a bacillus which morphologically and in staining reactions is identical with the lepra bacillus. In some cases only a few were found and then only after prolonged search; in other cases they were quite numerous. They occurred singly and in groups with varying frequency, and did not appear within leucocytes as often as did the tubercle bacillus; many were beaded. In almost every case some of the organisms, but not all, showed the long, slender, spindle-shaped outline characteristic of those found in the nasal discharges and in leprous nodules. The negative case shows clinical evidence of the disease.

Denver Medical Times and Utah Medical Journal

April

78 The Complement Fixation Test for Syphilis (Wassermann Reaction) by the Bauer-Hecht-Fleming Method. B. Oettinger, Denver.
79 Quinin and Urea Hydrochlorate as a Local Anesthetic. F. M. McCartney, Denver.
80 Is Alcohol Necess [illegible]? F. G. Byles, Denver.
81 A Substitute for [illegible] of Tampon and a very Rare Case of [illegible] inalis. Z. V. Dworzak, Denver.
82 Moral and Physical Advantages to be Derived Under the Library and Gymnasium Act, 1909. E. E. Hinckley, Provo, Utah.
83 Mistakes in Tabes Dorsalis. W. B. Ewing, Salt Lake City.

New Orleans Medical and Surgical Journal

April

84 Beck's Bismuth Paste for Diagnosis and Therapeutics. H. B. Gessner, New Orleans.
85 Etiology of Infantile Diarrhea. C. W. Duval, New Orleans.
86 Pulse Tracings—Their Application and Value in Practice. I. I. Le ann, New Orleans.
87 Plea for Enforced Vaccination in the State. R. O. Simmons, Alexandria, La.
88 Vital Statistics. B. A. Ledbetter, New Orleans.
89 Work of the Louisiana Antituberculosis League. E. L. McGehee, New Orleans.
90 The Symptomatology of Empyema of the Frontal Sinus. G. W. Robinson, Shreveport, La.
91 Pathologic Relations Between the Frontal Sinus and Diseases of the Eye. H. upuy, New Orleans.
92 Etiology of Frontal Sinusites. G. King, New Orleans.
93 Treatment of Empyema of Frontal Sinuses. R. F. Harrell, Alexandria, La.
94 Ethyl Chlorid as a Local Anesthetic. H. B. Gessner, New Orleans.

American Journal of Orthopedic Surgery, Philadelphia

May

95 *Operative Remodeling of the Tarsus for Immediate Correction of Severe and Relapsed Forms of Club-Foot. B. Bartow, Buffalo.
96 Experimental Work with Materials for Plugging Sinuses and Bone Cavities. P. Le Breton, Buffalo.
97 Spina Bifida: Its Relation to Orthopedic Surgery. D. LaFerte, Detroit.
98 Static Foot Error in Private Practice. A. H. Williams, Hartford, Conn.
99 The Rôle of the Foot and Leg Muscles in Flat-foot. H. W. Orr, Lincoln, Neb.
100 *Tendon Transplantation in Flat-foot. E. W. Ryerson, Chicago.
101 Modifying Injections in Treatment of Tuberculous Osteoarthritis. P. Redard, Paris.
102 The Epiphysis: Especially Retardation and Stimulation of Growth. W. P. MacAusland, Boston.
103 *Two Unusual [illegible] Fracture of the Shaft of the Femur. J. [illegible]
104 Congenital [illegible] Forearms. C. F. Painter, Boston.
105 Bone Wiring: Retroversion of Upper Extremity with Operation for Correction; Interpelvic Exfoliation with Removal through Suprapubic Cystotomy. S. L. McCurdy, Pittsburg.
106 Congenital Absence of Vertebræ Below the First Sacral, and Malformation of the Lower Cervical and Upper Dorsal Vertebræ. R. R. Fitch, Rochester.

95, 100. Abstracted in The Journal, Aug. 7, 1909, pp. 478, 479.

103. Results Following Fracture of Femur.—Five years ago a well-grown, healthy girl, aged 8 years, was thrown from a horse and suffered a fracture of the left femur near the junction of the middle and upper thirds of the shaft of that bone. It being impossible to adjust the fragments satisfactorily, and there apparently being no union at the end of two weeks, the fractured bone was set by an open operation. The operation wound healed under the first dressing. A pressure sore developed on the heel and another on the dorsum of the foot of the injured limb as a result of the traction. About two months after the operation keloids began to develop in the scars of the pressure sores and the operation wound. At that time the limbs were of the same length as measured by the operating surgeon and the consulting orthopedic surgeon. But after a year it was found that the fractured limb was longer than the other. Two and one half years after the accident, the limb measured an inch longer than the other. Five years after the accident the limb measured two and one-quarters inches more than the uninjured limb. The girl is large, well and active, and, except for the elevation on the shoe of the uninjured side, is unconscious of her disability. In this case there was never any evidence of any injury at any of the epiphyseal junctions; and the appearance of the femur in the *x*-ray picture appears to be conclusive evidence that the increased growth has taken place in the shaft of the bone at the point where it was broken.

The other patient was a boy of average height and slender build, 14 years old. On Nov. 27, 1908, while playing foot-ball he sustained a fracture of the right femur in the upper part of the shaft. Five and one-half weeks after the accident, union appeared to be firm, but the thigh was bowed outward and forward in its upper part, and the limb was 2¼ inches short. Six weeks after the accident Ridlon applied his stretching machine, refractured the femur, made the limb straight, and put it up in full normal abduction, extending from the plaster boot a spica well up on to the ribs. After 2 or 3 days the patient complaining of his heel, a hole was cut and a blister found which ultimately became a pressure sore. There being complaints of the dorsum of the foot, the plaster boot was soon removed. From time to time the plaster spica was shortened at the top and at the bottom until the knee was free, also the ribs on the right side. After 6 weeks the boy was allowed up on crutches, and encouraged to bear some weight on the limb, but it was 12 or 14 weeks before he could walk without his crutches and without pain or weakness. Sixteen weeks after the operation, and 22 weeks after the accident, the splint was removed. The limb was straight and measured ¾ inch less than the other, the gain in length having been 1½ inches. The *x*-ray picture made at this time shows that the lengthening resulted mainly, perhaps wholly, from the pulling downward of the lower fragment. Instead of overlapping the upper fragment 2 inches or more it overlaps it a half-inch or less. Although the *x*-ray picture shows great deformity still present in the bone, the limb as a whole is straight, and the long period of full abduction more than compensates for the ¾ inch of real shortening, and the limb is still practically so long as to be in his way when walking without an elevation to the shoe of the uninjured leg. The results in this case demonstrate the usefulness of the stretching machine in fracture of the shaft of the femur, Ridlon says, when it is desired to treat such fractures with a plaster splint.

Yale Medical Journal, New Haven

April

107 The Army Medical Service. C. F. Craig, U. S. Army.
108 *Fifty Cases Treated by Bacterial Vaccines. J. W. Fisher, Middletown, Conn.
109 Problem of Finding Employment for Tuberculous Individuals. M. G. Markham, New Haven.

108. **Bacterial Vaccines.**—The 50 cases reported by Fisher occurred in the services of the physicians of the Connecticut Hospital for the Insane and the adjoining city. Fisher prepared vaccines for all of them. They included 18 different conditions and 7 different types of bacteria. Of the 50 patients, 34 recovered much more rapidly than would be expected under usual treatment. One left the hospital after one injection; 2 died; both the latter were practically moribund when treatment was begun. The cases included one of appendical abscess; a suppurating sinus of the leg; two cases of metritis, endometritis and pyosalpinx; 1 case each of hay fever; bronchial asthma; abscess of the gall-bladder; pyelonephritis; infection of the hand; 6 cases of *pneumonia; 3 cases of coryza;* 4 cases of acne.

West Virginia Medical Journal, Wheeling

April

110 The Early Recognition of Tuberculosis. E. Cummings, Hinton.
111 Appendicitis and the General Practitioner. W. W. Golden, Elkins.
112 Institutional Specialism. T. L. Barber, Charleston.
113 Abortifacient Drugs Simulating Frequently Observed Diseases. G. R. Davis, Price Hill.

The Ohio State Medical Journal, Columbus

April

114 Major Smith's Operation for Cataract. J. W. Millette, Dayton.
115 Clinical Aspects of Visceral Arteriosclerosis. J. H. Schroeder, Cincinnati.
116 Treatment of Clubfoot in Infancy. A. H. Freiberg, Cincinnati.
117 Fistula-in-Ano with Special Reference to Tuberculosis. G. B. Evans, Dayton.
118 Adenoids. G. C. Schaeffer, Columbus.
119 Causation of Extrauterine Pregnancy. J. W. Rowe, Cincinnati.
120 The After-Care of the Insane. G. H. Williams, Columbus.

Bulletin Johns Hopkins Hospital, Baltimore

April

121 The Occurrence of Goiter (Active Thyroid Hyperplasia) in Fish. D. Marine and C. H. Lenhart, Cleveland, Ohio.
122 Presentation of a Portrait of Dr. Ferdinand Edme Chatard to the Medical and Chirurgical Faculty of Maryland. J. W. Williams, Baltimore.
123 Cutaneous Distribution of the Superficial Ramus of the Radial Nerve and its Compensatory Extension. I. Hardesty, Berkeley, Cal.
124 Primary Union after Mastoidectomy. H. O. Reik, Baltimore.
125 Present Attitude of the Tuberculosis Nurse Toward Her Work. E. N. La Motte, Baltimore.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 23

1 Treatment of Chronic Disease. R. F. Fox.
2 Diagnostic Value of the Chemical Analysis of the Gastric Contents After a Test Meal. W. H. Willcox.
3 Acute Arthritis of Doubtful Origin. G. B. Buchanan.
4 *A New Method of Treating Acute Pulmonary Tuberculosis by the Alternate Use of Human and Bovine Tuberculin. H. W. Crowe.
5 *Treatment of Exophthalmic Goiter with the Milk of Thyroidless Goats. W. Edmunds.
6 Case of Typhoid Spine. E. R. Carling and L. R. King.
7 *The Minute Structure of the Thyroid. D. C. Watson.

4. **New Method of Treating Acute Phthisis.**—Crowe has found that a prolonged reaction resulting from the use of either human or bovine tuberculin can be cut short by a dose of the other, provided that there has been developed some degree of hypersensitiveness to the form of tuberculin which excites the reaction. A start is made by an inoculation of 1/100,000 milligram of T. R. (or the bovine tuberculin—P. T. R.—in the most acute cases, as it appears slightly less liable than the former to cause acute reactions). This dose is repeated and gradually increased once in from 7 to 10 days until a definite febrile reaction is provoked, accompanied by signs of an exacerbation in the disease, malaise, etc. The reaction may not appear for 3 or even 6 days after an inoculation, hence the interval between the doses.

This rise of temperature is allowed to continue until it seems to be steady at the higher level or until the physical condition of the patient causes alarm, when a dose of P. T. R., half the quantity of the exciting dose of T. R. (but not as a rule less than 1/100,000 milligram) is inoculated. The next day the temperature may remain up, but the day after, at latest, it will fall, and after a few days there will be found to be a definite improvement in the physical condition of the patient and also in the local lesion. This inhibitory dose is the exception above referred to. It is now advisable to rest for a time, say a fortnight, or until the temperature has again risen, when the same dose of P. T. R. must be repeated and gradually increased, until for a second time a febrile reaction is induced, when it will be found that a dose of T. R. will not have the effect of cutting short the P. T. R. reaction.

Crowe maintains that on general principles autoinoculations should have a greater effect in influencing the course of phthisis for good, than artificial tuberculin; that is, regarding tuberculin merely as an agent which stimulates the system to produce antibodies. But tuberculin itself causes autoinoculation. The power to stop an autoinoculation at will diminishes this danger. By using T. R. and P. T. R. in an alternating fashion, while the patient becomes sensitized to the one form, the power to prevent mischief is vested in the other, and on a continuance of inoculation of that other the inhibitory action is transferred to the former. For a full development of this inhibitory action hypersensibility should be developed, hence small doses should be used because an autoinoculation effect after the first dose or two is not desirable.

5. **Treatment of Exophthalmic Goiter.**—To the 15 cases previously reported Edmunds adds 4; 3 of the patients were benefited by the milk. Few of the first 15 patients could be traced—and only one of these is in good health.

7. **Minute Structure of Thyroid Gland.**—The examination of the thyroid by Watson in a series of wild rats, all apparently healthy, has shown wide variations in the histologic appearances of this gland. The source from which the animals were obtained was noted in all instances. Watson is of the opinion that the effects observed indicate that modifications in structure and function of the thyroid occur in association with different environmental conditions. Diet may have been the chief factor in inducing the modifications of structure. In this connection it is of interest to note that it was observed that the thyroid of all the animals from any one source invariably presented the same general characters.

British Medical Journal, London

April 23

8 *Surgical Treatment of Certain Cases of Glycosuria. A. W. M. Robson.
9 Activity of Cells and Fluids of the Body in Prevention and Cure of Disease. J. M. Beattie.
10 *Paleogenesis as Explanatory of Certain Forms of Disease. J. Hutchinson.
11 *Fecal Vomiting During Anesthesia: Method of Obviating its Danger. D. W. Buxton.
12 Postoperative Suppression of Urine. L. R. Braithwaite.
13 Hemolysis by Weever Venom. H. M. Evans.
14 Malarial Fevers and Quinin. J. H. Whelan.
15 Cowpox in Man. R. W. Cruickshank.
16 Complete Transposition of the Viscera: Postmortem Report. G. A. Allan.
17 Defective Nipples. H. B. Billups.
18 Perforation of a Gastrojejunal Ulcer—Operation: Recovery. W. H. Battle.
19 Recurring Jaundice in Mother and Infant. E. N. Nason.

8. **Surgical Treatment of Glycosuria.**—Robson holds that certain patients with diabetes may be materially benefited, and some even may be cured if the glycosuria be of pancreatic origin; and that a fairly accurate prognosis of the onset of

diabetes may be made by a careful examination of the urine and feces in certain cases at a period long antecedent to the appearance of glycosuria, and that in this early stage the onset of diabetes may be averted by timely surgical treatment. In his review of the subject, he shows that we cannot hope to cure or even materially to relieve, except temporarily, pancreatic diabetes depending on extensive destruction of the gland by organic disease, whether that be dependent on growth or on chronic inflammation, if either class of disease has extensively involved the islands of Langerhans; nor can we hope to benefit that form of inflammation that singles out the cell islets—interacinar pancreatitis. But, unfortunately, by far the greater number of cases of glycosuria due to pancreatitis are dependent on inflammation of the catarrhal type in which the gland is invaded by way of the ducts from varying causes, such as gall-stones, pancreatic calculi, duodenal catarrh (often associated with duodenal ulcer), typhoid fever, etc., and a considerable proportion of these patients, Robson believes, are curable by surgical measures. At a later stage an interstitial inflammation is produced, which may be arrested and decided relief given by surgical means, though the damage already done to the pancreas cannot be repaired. At a still later stage, cirrhosis of the gland takes place, and if the cell cyclets become involved extensively surgical means are quite useless.

The early recognition and treatment of interstitial pancreatitis, or of pancreatic catarrh, by drainage of the bile ducts, and thus indirectly of the pancreatic ducts, and the removal of the cause, whether that be gall-stones, duodenal ulcer or other conditions, may be the means of averting diabetes. In certain diseases of the pancreas, even after the appearance of glycosuria, surgical treatment is well worth considering, as in a number of cases it has led to a complete disappearance of sugar from the urine, and in others to an arrest in the disease causing glycosuria. Every case of diabetes should be considered from its etiologic point of view, seeing that certain cases of glycosuria of pancreatic origin are curable, and in others the progress of the disease may be arrested by suitable surgical methods that can be carried out with very small risk.

10. **Paleogenesis.**—The term "paleogenetic" employed by Hutchinson is applicable to all conditions supposed to be due, wholly or in part, to inheritance from ancestry extremely remote, so much so that in the majority of cases all history of such association has been lost. The possibilities of paleogenesis are not limited by species or genus, but may be recognized in the most distantly related animals. Thus the condition known as the "dappled" skin occurring both in deer and horses Hutchinson now claims for human beings. It is simply a spotted skin in which the spots become visible only under certain conditions. He also holds that we may recognize paleogenetic structural peculiarities in the dappled skin of leucoderma colli, but a similar predisposition is to be traced in xanthelasma palpebrarum, in the common form of leucoderma, and the very curious congenital conditions which have been recognized under the names of linear ichthyosis, ichthyosis herpetiformis, or Biett's bands. The simplest example of paleogenesis is the "linea fusca," which used to be regarded as a symptom attending a first pregnancy, but which obviously is "the abdominal line" conspicuous in many quadrupeds, made visible in most women by the pigment disturbance which often attends pregnancy.

11. **Fecal Vomiting During Anesthesia.**—It is suggested by Buxton that the following method may prove useful in preventing such an occurrence. Lavage may be employed to clean out the stomach and esophagus with boric-acid solution and hot water. The next step is to perform laryngotomy under local analgesia, or even under light anesthesia, but it is essential in the latter case that the laryngeal reflex should remain active, because vomiting or regurgitation may occur while the larynx is being opened and the stomach tube may be expelled, or vomitus travel beside it into the pharynx. As soon as the larynx is opened and a cocain spray used to lessen spasm, chloroform is to be administered through the laryngeal tube to full anesthesia The mouth is opened by a gag as soon as the patient is analgesic, and a full-sized esophageal tube introduced into the stomach. If the preliminary lavage has been carried out by means of a large tube, and if it has not been expelled, the only further step necessary is to pack very carefully both the upper opening of the larynx and the pharynx around the esophageal tube. As soon as this is done, the free end of the esophageal tube must be allowed to drain into a vessel containing a deodorant and antiseptic. It is essential that the tube be introduced and maintained in the stomach, and that the packing round it be tight. The packing of the larynx is done in exactly the same way as that carried out before an excision of the maxilla, when a preliminary laryngotomy is performed. Packing round the esophageal tube is rendered more easy by cocainizing the pharynx, as it is essential that there shall be no leak of fluid around the tube.

Medical Press and Circular, London

April 13

20 Suppuration in the Maxillary Antrum. J. Donelan.
21 Workmen's Compensation Act as it Affects the Medical Profession. T. S. Kirk.
22 More Recent Conceptions Regarding Hysteria and their Relation to the *Traumatic Neurosis.* T. A. Williams.
23 Suppurating Appendicitis. A. C. A. Rabagliati.
24 Heat: "Sensible," "Latent" and Pathologic. J. Knott.

Australasian Medical Gazette, Sydney

February

25 Necessity for Organization in the Profession. R. Worrall.
26 Contract Work. E. P. Thurstan.
27 Treatment of Gall-Stone Disease. F. Hinrichsen.
28 Treatment of Trigeminal Neuralgia by Injections of Alcohol. A. W. Campbell.
29 Exclusion of the Skin in Surgery. A. S. Vallack.
30 Intestinal Perforation in an Ambulatory Case of Typhoid: Recovery. H. G. Loughran.
31 An Unusual Form of Intestinal Ulceration Following Abdominal Section. W. C. R. Mainwaring.
32 Bilharzia Hematobia. J. Morton.

Bulletin de l'Académie de Médecine, Paris

April 12, LXXIV, No. 14, pp. 341-351

33 *Intracranial Dermoid Cysts. Differentiation by Adherence of Skin to Bone. O. M. Lannelongue.
34 *Test of Purity of Milk by Estimation of Catalytic Power. (Détermination indirecte de la richesse bactérienne des laits de vache: Epreuve catalasimétrique.) J. Sarthou.

33. **Intracranial Dermoid Cysts.**—Lannelongue describes a case in which the adherence of the scalp to the occipital bone confirmed the diagnosis of a dermoid cyst in the cerebellum. He discusses the development of such cysts, seeking to sustain their ectodermic origin.

34. **Catalytic Test for Purity of Milk.**—The catalytic action of milk in respect to a solution of hydrogen dioxid is an index of the number of bacteria it contains, and this test is currently applied, it is stated, in the Netherlands. The intensity of the reaction is gaged by the volume of oxygen liberated in 40 c.c. of milk treated with 10 c.c. of solution of hydrogen dioxid at from 20 to 25 C. (from 68 to 77 F.).

Presse Médicale, Paris

April 13, XVIII, No. 30, pp. 265-272

35 *Local Anesthesia and *Major Operations.* H. Chaput.
36 Cancer Metastasis by Retrograde Invasion of the Lymphatics. (Les métastases cancéreuses par envahissement lymphatique rétrograde.) E. Geraudel.

April 16, No. 31, pp. 273-288

37 *Malformations of Syphilitic Origin. (La syphilis dysplasique.) P. Delbet.
38 *Serodiagnosis of Syphilis. (Séro-diagnostic de la syphilis d' après les résultats enregistrés à l'institut Pasteur au cour de l'année 1909). C. Levaditi and A. Latapie.
39 *Pathogenic Treatment of Tabes and Paresis. (Traitement pathogénique des affections nerveuses parasyphilitiques.) A. Sézary.

35. **Local Anesthesia for Major Operations.**—Chaput has performed 37 major operations lately under local anesthesia, including amputation of the breast or arm, resection of the shoulder, hysterectomy and 25 laparotomies. His technic is somewhat similar to the Schleich method, but he uses large amounts of a weak solution of the anesthetic, injected with large syringes, thus infiltrating the tissues extensively step by step with the operation. Much of the fluid escapes again as the incision is made.

37. **Disturbances in Development.**—Delbet is convinced that syphilis is responsible for more evil than it generally is credited with. He obtained a positive Wassermann reaction in 7 children with a congenital affection of the nervous system, Little's syndrome, contractures, etc., although there was

nothing otherwise to suggest syphilis. The reaction was positive also in a case of cleft palate and one of diffuse angioma.

38. **The Wassermann Reaction at the Paris Pasteur Institute.**—This article tabulates the results of the Wassermann test applied to 821 persons during 1909. The findings were positive in 92 per cent. of the patients with syphilis of less than two years' duration, in 63 per cent. of those of over two years, and 0 per cent. in 18 cases in which syphilis could be excluded; they were also positive in 70 per cent. of the cases of paresis and in 60 per cent. of tabes. The method proved valuable for the retrospective diagnosis of syphilis.

39. **Pathogenic Treatment of Syphilitic Nervous Disease.**—Sézary explains tabes and general paresis as the result of an early reaction in the meninges to the syphilitic infection. It does not manifest itself at the time in any way except by a leucocytosis in the cerebrospinal fluid. Given mercurial treatment at this stage it is readily cured, and he consequently advises prompt mercurial treatment when lumbar puncture reveals evidences of the specific irritation of the meninges persisting after subsidence of the superficial manifestations. The inconvenience of the explorative lumbar puncture is far outweighed, he asserts, by the danger from the ignored meningeal trouble which is liable to progress to tabes or general paresis but which it is thus possible to nip in the bud.

Semaine Médicale, Paris

April 20, XXX, No. 16, pp. 181-192

40 Characteristics of the Venous Jugular Pulse in Asystole of the Left Side of the Heart. (Les caractères du pouls veineux jugulaire dans l'asystolie du cœur gauche.) L. Bard.

Archiv für Verdauungs-Krankheiten, Berlin

XVI, No. 2, pp. 121-266

41 *The Misleading Evidences of Radiology of the Stomach (Kritische Glossen eines Klinikers zur Radiologie des Magens.) B. Stiller.
42 *Changes in the Gastric Mucosa after Exclusion of the Pylorus. (Veränderungen der Magenschleimhaut nach Pylorusausschaltung.) A. Jianu and J. Grossman.
43 *Intermittent Spasm of Both Pylorus and Cardia as Reflex Neurosis with Gall-Stone Disease. (Intermittierender Spasmus der beiden Magenpforten als Reflexneurose bei Cholelithiasis.) W. Buettner.
44 Experiences witl , Stomach and Intestines. (Radiologie des Digestionstrak in No. 1.

41. **The Misleading Findings with Radioscopy of the Stomach.**—Stiller says that at first he meekly accepted as beyond appeal the dictum of the radiologists that the cylindrical or steer's horn shape of the shadow cast by the bismuth emulsion in the stomach represented the normal shape of the stomach. This finding was entirely at variance with his thousands of examinations of the stomach by other means and with those of physiologists the world around, but the radiologists merely pointed to their radiographs and facts seemed to speak louder than words. But now he raises his voice in protest and describes experimental and clinical research which has demonstrated that the peculiar steer's horn shape is not the normal shape of the stomach but is the specific reaction of the stomach walls to the action of the clinging particles of metal in the emulsion. The shadow cast is instructive as to the effect of bismuth on the stomach, but it throws no light on the shape and behavior of the stomach in the absence of bismuth. The stomach walls contract under the influence of the bismuth quite differently from the contraction with ordinary food. Artificial distention of the stomach with air or gas is, he declares, by far the most reliable means of determining the normal shape of the stomach.

42. **Behavior of the Gastric Mucosa After Exclusion of the Pylorus.**—The history of this operation and experiences with it to date in various clinics are reviewed and also the results of experiments on dogs to show the changes in the gastric mucosa after the operation. It is far preferable to gastroenterostomy alone, the writers conclude, if pylorectomy is impossible for any reason. Cutting the pylorus away from the stomach and suturing each stump to make a blind pouch of it removes the ulcer from the action of the digestive juices, etc., while the excluded stomach mucosa rapidly develops vacuolar degeneration, thus providing conditions, they state, that favor the healing of the ulcer and ward off hemorrhage, perforation and cancerous degeneration later.

43. **Intermittent Spasm of the Stomach as Reflex Neurosis with Gall-Stones.**—Buettner's patient was a man of 38 who had no suspicion of his tendency to cholelithiasis and his recurring gastric spasms had long been supposed to be a primary neurosis. The attacks commenced with severe oppression and pain in the stomach region and the stomach was seen to be distended with gas, but the pulse was regular and not faster than usual and there was no tendency to labored breathing. The attacks sometimes lasted for hours but there was never any vomiting. The motor functioning was also much exaggerated during the attack. The development of jaundice finally led to examination of the stools when it was found that gall-stones could be discovered in the stool sooner or later after each of the spasmodic attacks. If there had been no jaundice the mystery might never have been cleared up as the functional tests showed during the attacks various anomalies which were assumed at first to be the cause instead of the result. The pain in the stomach was so severe that it masked any possible gall-stone colic. He was unable to find any similar case on record in which the well-defined gastric syndrome was exclusively the result of a reflex neurosis, but he thinks that this may occur more frequently, unrecognized. After passing 238 gall-stones his patient seemed to be permanently relieved and has been free from jaundice and from all gastric disturbances to date.

Berliner klinische Wochenschrift

April 11, XLVII, No. 15, pp. 661-708

45 Importance of Chlamydozoa in Trachoma and Gonorrhea. L. Halberstaedter and S. v. Prowazek.
46 *Prowazek's Bodies in Conjunctival and Genital Secretions. (Fundorte der Prowazek'schen Körperchen.) B. Heymann.
47 Rupture of the Aorta in Pyemia. H. Scheuer.
48 can Section. (Extraperitonealer Kaiser-Methode.) H. Töpfer.
49 * ants. (Durstfieber bei Säuglingen.) E. Müller.
50 Treatment of Habitual Dislocation of the Shoulder. (Zur Behandlung der habituellen Schulterluxation.) E. Marcuse.
51 Dislocation of Tarsometatarsal Joint. (Luxation im Lisfranc'schen Gelenk.) P. Ewald.
52 Alcohol-Soluble Hemolysins in Acute Yellow Atrophy of the Liver. M. Jacoby.
53 Ease and Importance of Direct Visual Inspection of Upper Air Passages. (Direkte Untersuchungsmethoden der oberen Luftwege.) E. Meyer.

46. **The Prowazek Trachoma Bodies in Conjunctivitis and Gonorrhea.**—Heymann has examined the conjunctival secretion from 235 human beings and from 25 animals of 5 different species, including monkeys, but was never able to find the Prowazek bodies except in cases of trachoma and eye affections resembling trachoma, and in conjunctivitis in infants, and he also discovered the bodies in question in 2 cases of urogenital gonorrhea; these patients were the parents of twins each of which had severe conjunctivitis containing numerous gonococci and these bodies. Prowazek has reported similar findings in another family. This throws light on the nature of the bodies, especially as inoculation of monkeys and guinea-pigs with the conjunctival or urogenital secretions containing the bodies induced a conjunctivitis of gonorrheal type at first but later more of a follicular catarrhal form. In the animals thus inoculated the Prowazek bodies were found in large numbers in the conjunctivitis secretions. He found further that inoculation of genital secretions from patients with a history of conjunctivitis suggesting trachoma induced the same effects in the animals as inoculation of secretions containing the Prowazek bodies. [An editorial note on another page of the *Wochenschrift* states that Herzog, who has been making a special study of these bodies at Budapest, now announces that the Prowazek bodies are merely an involution form of the gonococcus.—ED.]

49. **Thirst Fever in Infants.**—Müller reports that fever developed in some infants who were resisting a change of diet and whom he was trying to accustom to the bottle or the breast by starving them to it. He describes two cases in detail, calling attention to the reciprocal relations between the weight and the temperature; whenever the weight showed that the children were suffering from insufficient intake of fluids, the temperature rose, while it declined again when tea was given. He is inclined to regard this thirst fever as the direct result of the concentration of the body juices, an alimentary, or rather negative alimentary fever, analogous to the "salt

fever" observed in infants. These experiences suggest that the custom of compelling a change of food by starving the children to it may have serious consequences; and also that salt fever may occur without any lesion of the intestines. Possibly the reduced elimination of water through lungs and skin may be partly responsible for the higher temperature. Müller refers to Crandell's report in 1899 of similar cases of fever, in which the temperature rose during abstention from fluids. It was first called "starvation fever," but Müller prefers the term "thirst fever."

Deutsche medizinische Wochenschrift, Berlin

April 14, XXXVI, No. 15, pp. 689-736

54 Treatment of Pneumothorax. G. Treupel.
55 Experimental Research on Epidemic Poliomyelitis. (Experimentelle Untersuchungen über akute epidemische Kinderlähmung.) E. Meinicke.
56 Shape of Stomach with Atony, Ptosis or Ectasia. (Form des [illegible]ns.) F. M. Groedel.
57 [illegible] loids for Formation of Concrements and [illegible] Bedeutung der Kolloide für die Konkre[illegible] Verkalkung.) L. Lichtwitz.
58 *[illegible] by External Pressure on the Blood Ves[illegible] und Beeinflussung des Pulses durch äusseren Druck auf die Blutgefässe.) E. Homberger.
59 Epicondylitis of the Humerus. G. Preiser.
60 Relations between Alcoholism and Nursing Capacity, Pulmonary Tuberculosis and Dental Caries. H. J. Greff.

58. **Changes in the Pulse Curve by Changes in External Pressure.**—Homberger gives the tracings in the case of a man of 50 complaining of dyspnea. The apex beat and heart sounds were not perceptible; the area of dulness was unusually wide. The pressure of the cuff altered the features of the pulse in one arm while the pulse in the other arm showed no such change. Homberger accepts these and similar findings in other cases as sustaining his assumption that the circulation of the blood does not depend on the heart alone but that the task is shared equally by the heart and the blood vessels.

Jahrbuch für Kinderheilkunde, Berlin

April, LXXI, No. 4, pp. 379-524

61 Metabolism in Course of Alimentary Decomposition. (Ueber den Stoffwechsel bei der alimentären Dekomposition.) L. F. Meyer.
62 *Orthostatic Albuminuria. F. Götzky.

62. **Orthostatic Albuminuria.**—Götzky has examined for albuminuria 346 children between the ages of 5 and 13. He found that 14.5 per cent. showed signs of orthostatic albuminuria, that is, 189 girls and 157 boys. There did not seem to be any more pronounced tendency to neuropathies among these children than among their mates, although enlarged tonsils or chronic pharyngitis were more frequent among them. He found no trace of pathologic lordosis among a large number of the children, while true lordosis was quite frequent among children free from any tendency to albuminuria. He discusses the diagnosis of orthostatic albuminuria, the favorable prognosis, etc., emphasizing the necessity for prophylaxis as the main point in treatment. The children should be protected against chilling, especially against getting their feet wet. The albuminuria itself should be left untreated. Overexertion should be guarded against but ordinary play and sports in moderation are to be encouraged. Heubner warns against bicycling, horseback riding and rowing as liable to be too violent exercise in such cases.

Medizinische Klinik, Berlin

April 10, VI, No. 15, pp. 571-612

63 Roentgen-Rays, Radium and Carbon Dioxid Snow in Treatment of Skin Diseases. (Neuere Methoden der Dermatotherapie.) W. Pick.
64 *Pathology of Banti's Disease. H. Luce. Commenced in No. 14.
65 *Serotherapy of Cerebrospinal Meningitis. M. Lateiner.
66 Tuberculin-Quinin Treatment of Kidney and Bladder Tuberculosis. W. Karo.
67 Permanent Action of Carbonated Brine Baths in Circulatory Disturbances. B. Schuster.
68 Importance of Systematic Weighing in Medical Treatment. J. G. Siebelt.
69 Sterilization of Drinking Water by Ultraviolet Rays from Quartz Mercury Vapor Lamp. (Sterilisation des Trinkwassers durch ultraviolette Strahlen.) J. Courmont and C. Nogier. (Apparat zur Sterilisierung von Trinkwasser durch die ultravioletten Strahlen.) C. Nogier.

April 17, No. 16, pp. 613-652

70 Research on Radium Emanations. W. His.
71 *Management of Narrow Pelvis in Obstetric Cases in the Home. (Behandlung des engen Beckens in der Aussenpraxis.) O. von Franqué.
72 *Active Immunization by Killed Vaccine Virus. (Aktive Immunisierung des Menschen mittels abgetöteter Pockenvakzine.) W. Knöpfelmacher.
73 Contents in Purin Bases of Various Articles of Food in Relation to Gout. (Zum Wesen und zur Behandlung der Gicht. Ueber den Purinbasengehalt der Nahrungsmittel.) T. Brugsch and A. Hesse.
74 *Autoserotherapy of Tuberculous Peritonitis by Autodrainage. (Autoserotherapie bei Bauchfelltuberkulose durch Dauerdrainage des Aszites unter die Haut.) K. Evler.
75 Importance of Wassermann Reaction for Balneologists and Physicians at Health Resorts. M. Friedlaender.
76 Research on and Application of Radium Emanations. (Demonstrationen zur Emanationstherapie.) S. Loewenthal. (Ungeregelte Verhältnisse bei Bestimmung und Bewertung der Radiumemanation.) E. Weisz.

64. **Banti's Disease.**—Luce gives the details of a typical case and discusses the history and literature of the subject. He is inclined to admit that the disease is similar to true pseudoleucemia and other pathologic processes originating in the spleen. The spleen process may be idiopathic, tuberculous or syphilitic or of other origin. The demonstration of a tuberculous etiology has not yet been made, but such probably exists, similar to the tuberculous form of pseudoleucemia described by Sternberg and the data presented by Fischer, Sabrazès and others in regard to certain forms of pseudoleucemia in which no tubercle bacilli could be discovered in the lymphomas and yet inoculation of animals with lymphoma tissue gave positive results. He thinks it probable that the spleen, serving as a filter for the blood may become injured by any severe infection of the blood or repeated mild infections, and that this may be the origin of the development of the Banti syndrome. The peculiar vulnerability of the lymphatic system in the young explains, he says, the frequency of the Banti syndrome before the age of 30.

65. **Serotherapy of Epidemic Cerebrospinal Meningitis.**—Lateiner reports 26 cases with encouraging results of serotherapy.

71. **Treatment of Narrow Pelvis in the Home.**—The advantages of institutional management of obstetric narrow pelvis are emphasized by von Franqué but he also outlines the measures that should be advised for use by the general practitioner when this is impossible. In regard to perforation he remarks that if any one has conscientious scruples against it he should not attempt obstetric practice. Not until every parturient with a narrow pelvis is delivered in a maternity can this operation be spared.

72. **Active Immunization by Killed Vaccine.**—Knöpfelmacher reports successful subcutaneous injection of vaccine which rendered the individual immune thereafter to ordinary vaccination. This immunity was realized without development of a pustule. He tabulates the findings in 20 cases. The research reported shows that human beings as well as animals can be rendered immune by subcutaneous injection of killed germs. The vaccine was heated to 58 C. 30 minutes to "kill" it.

74. **Serotherapy in Tuberculous Peritonitis: Autodrainage.**—Evler has applied to tuberculous ascites the principle of autodrainage recently introduced in treatment of hydrocephalus. In a patient with recurring ascites from tuberculous peritonitis he found the peritoneum studded with nodules. He separated the recti muscles and sutured the peritoneum in the opening thus made, producing a permanent fistula opening into the subcutaneous tissue. The skin was sutured completely above. The ascites was thus drained away while the diversion of the ascitic fluid induced an autoserotherapy. Improvement was marked from the start; the ascites did not recur and the patient rapidly regained 25 pounds in weight. He was a man of 32 and the peritoneal affection seems to be entirely cured, Evler says, although there is still some cough and the man complains of pains in the chest and back as before the operation.

Münchener medizinische Wochenschrift

April 12, LVII, No. 15, pp. 777-832

77 Effectual Action of Single Large Dose of Arsobenzol in Relapsing Fever. (Wirkung des neuen Arsenpräparates (606) Ehrlichs bei Rekurrens.) J. Iversen.
78 *Treatment of Diffuse Peritonitis with 1 per cent. Camphorated Oil. G. Hirschel.
79 [illegible] of the Mirror Sphygmograph for Study of the [illegible]). Frankschen Spiegelsphygmographen [illegible] der Pulsform.) E. Veiel and E. [illegible] des O. Frankschen Spiegelsphygmographen mit dem Jaquetschen Kardiosphygmographen bei Aenderungen des Pulsrhythmus.) H. Schmid.

80 Albumin Reaction in the Blood of the Insane. (Eine Eiweissreaktion im Blute Geisteskranker.) W. Geissler.
81 *Iron Splinters in the Crystalline Lens. (Zur Therapie der Eisensplitterverletzungen der Linse.) A. Elschnig.
82 *Serotherapy of Tetanus. (Tetanus traumaticus mit Antitoxin "Hochst" und Blutserum eines geheilten Tetanuskranken geheilt.) A. Wiedemann.
83 Improved Technic for Obtaining Blood for the Wassermann Reaction. (Ein schonendes Verfahren der Entblutung von Tieren zu Zwecken der W. Reaktion.) J. Wetterer.
84 Indications and Contraindications for Ergot in Obstetrics. (Zur Anwendung der Ergotinpräparate in der Geburtshilfe.) H. Walther.
85 *Adherent Pericardium and Cardiolysis. (Ueber adhäsive Perikardobliteration und Kardiolyse.) K. Schlayer.

78. **Treatment of Diffuse Purulent Peritonitis with 1 Per Cent. Camphorated Oil.**—Hirschel reports 9 additional cases, supplementary to 3 reported in 1907, in which from 100 to 300 gm. of 1 per cent. camphorated oil were introduced into the abdominal cavity and spread over the intestines and walls by the hand wrapped in gauze. A counter incision was then made and small drains inserted at various points and the abdomen closed almost completely. The oil seems to prevent absorption by the peritoneum, while the addition of the camphor has a tonic action. This procedure was not attempted except in the desperate cases, and the recovery of 55 per cent. in the last series confirms the favorable action of the measure. The main benefit is probably mechanical, either by stopping the efferent lymphatics or by clogging the bacteria in the oil, similar to the action of Peruvian balsam in infective wounds. He adds that Hoehne has reported good results in 42 cases with introduction of 30 c.c. of 10 per cent. camphorated oil as a prophylactic measure before extensive gynecologic operations.

81. **Treatment of Iron Splinter in the Crystalline Lens.**—Elschnig reports several cases of splinter of iron in the transparent lens and four in which the splinter had induced cataract. In one in the first group the perforation in the anterior capsule had already closed up entirely but he succeeded in opening the capsule and extracting the foreign body without impairing the transparency of the lens. It has been his experience that the cataract from an iron splinter is not hard, as generally supposed, and that up to the age of 40 the foreign body may be successfully extracted.

82. **Serotherapy of Tetanus.**—Wiedemann injected in a child with threatening traumatic tetanus about 35 c.c. of serum from 100 c.c. of blood taken from a healthy boy of 14, who two years before had recovered from very severe tetanus. This serotherapy was supplemented by antitetanic serum. The patient promptly recovered and the sudden improvement after the human serum had been injected seems to indicate, he thinks, that it had special efficacy. There have been 3 cases in Wiedemann's district in the last thirty years in which persons just after death from tetanus made sudden movements, the convulsive contraction thus being arrested by beginning decomposition which evidently nullified the action of the tetanus toxin. This suggests that possibly blood serum taken from a tetanus patient (or possibly from a healthy person) after being left a few hours outside of the body, might prove effectual in treatment of tetanus; the condition of the serum then would approximate that directly after death from tetanus.

85. **Adherent Pericardium and Cardiolysis.**—Schlayer knows of only 9 cases in which Brauer's technic of cardiolysis has been applied outside the Tübingen clinic where the operation has been done also in 3 cases, all in the year 1906. The results in these 3 cases are not very encouraging; the operation was followed by sudden paralysis of the heart in one case and no benefit was observed in the second and but transient in the third. He analyzes 12 cases of polyserositis at the clinic with or without weakness of the heart, his final conclusions being that the indications for operative treatment of adherent pericardium depend more on the general tendency to polyserositis than on the involvement of the heart. When the polyserositis is extensive and progressive, little benefit can be anticipated from cardiolysis. In one of his cases a simple laparotomy was followed by retrogression of the main disturbances, the ascites no longer recurring. He adds that the ultimate outcome in the cases of cardiolysis in the literature has not been reported, although great benefit was derived at once from the operation which released the adherent heart from its extra work in moving the chest wall.

Therapeutische Monatshefte, Berlin

April, XXIV, No. 4, pp. 169-224

86 *Medical Reprints and the Advertising of Proprietaries. (Reklame durch Sonderabdrücke.) W. Heubner.
87 *Hot Gelatin Injections in Chronic Catarrh of the Large Intestine. L. von Aldor.
88 Cholelithiasis Generally a Disturbance in the Metabolism of the Liver. (Ist die Cholelithiasis eine Stoffwechselkrankheit der Leber, oder ist sie eine Infektionskrankheit?) C. B. Schürmayer. Commenced in No. 3.
89 Elimination of Bromin [illegible] von anorganischem und [illegible] den Urin nach Einfuhr [illegible] Bermann.

86. **Medical Reprints and the Advertising of Proprietaries.**—Heubner comments with approval on the step taken by the *Therapeutische Monatshefte* in refusing to give manufacturing chemists reprints of articles that have appeared in its columns. The manufacturers have hitherto been using reprints of this kind to distribute as literature on their products. Heubner remarks on the credulity with which physicians are impressed with the alleged virtues of new drugs, saying that they are unable to judge new drugs for themselves as they can judge fakes of other kinds. The true value of the drug, he continues, cannot be estimated from the first few laudatory reports on its action. Any physician giving the drug during this tentative stage should appreciate that he is merely giving it a trial, and should watch its effects with the closest care and in the most critical spirit. The physician under these circumstances must be strictly impartial, free from any bias in favor of the drug. But the interests of the manufacturing chemists are all against this impartial study of a new drug. They want to push the drug into prominence and general use at once, and seek by every means to influence the physician's mind. The suggestive name, the way the preparation is put up, the profuse advertising, the alluring prospectus and distribution of free samples—all combine to arouse interest in the drug. Medical men are not so readily influenced by suggestions from patients and the general public, but they are swayed by what other physicians have to say in regard to a new drug. Hence it has long been the custom for pharmaceutic firms to send with their advertising matter reprints giving a favorable opinion on a new drug. Heubner remarks that it has happened that such articles have been written to order. But, as a rule, he continues, they are the honest expression of the authors' opinion. They can only rejoice that wide circles are thus enabled to benefit by the fruit of their labors. The business end of the medical journal profits by it, and the editorial department has become habituated to regard the custom as a matter of course. Heubner asserts, however, that the custom is not the expression of a healthy interrelation between the medical profession, the medical press and the manufacturing chemists. Logical as it may seem to post physicians in regard to the qualities of new drugs, the impression produced by this custom is a false one. It leads to exclusively favorable impressions as it is manifest that only articles containing a favorable verdict on the drug are distributed by the manufacturers. Critical or denunciatory articles are not included in the literature sent out. The information which the physician receives from the manufacturers by means of the reprints is thus one-sided and false. Not only do the contents of the reprints serve to sustain the claims made for new drugs but the names of well-known writers and, with unknown names, the prestige of the medical journal from which the reprint is taken—all help in the advertising campaign. It is thus evident that by supplying reprints to manufacturing firms, authors and editors, consciously or unconsciously, Heubner says, are working in the interests of the commercial houses, while they are working against the interests of physicians seeking to obtain an unprejudiced, objective impression of the new drug. A journal which strives to keep its readers informed in the most comprehensive, non-partisan manner on the special field of science to which it is devoted annuls the ideal uses which it cherishes by giving to outsiders a selection from its articles and permitting their distribution in the form of reprints outside the sphere of its responsibility. The physician trusting to the guidance of the journal is thus led astray. Heubner thus

regards it as impossible for a high-class medical journal to continue this custom of supplying reprints to commercial firms. He adds that it must gradually penetrate deeper into the consciousness of medical men that the present-day influence of pharmaceutical industry on medico-therapeutic thought and action is in many ways more powerful than conducive to the interests of the sick and of science. A reduction of this influence will rather promote than check true progress in therapeutics.

87. **Treatment of Chronic Intestinal Catarrh with Hot Gelatin.**—The large intestine is favorably influenced in catarrhal conditions by injection of a very hot solution of gelatin, says von Aldor. He reports 7 cases in detail in which this treatment was followed by a complete cure of severe chronic catarrh of the large intestine, with diarrhea, which had resisted all other measures. The sphincter and a short distance above are extremely sensitive to heat, and consequently the solution is injected through a tube about 5 inches long, with the patient reclining on the left side. From 40 to 80 c.c. (1 or 2 ounces) of a 10 per cent. solution of gelatin dissolved in water at a temperature of 45 or 52 C. (113 to 125 F.) are injected. The patient lies still for two hours afterward with heat applied to the abdomen; von Aldor has always used for the solvent water Carlsbad sprudel thermal water, as he practices at Carlsbad. Gelatin is a valuable food in gastrointestinal disturbances with intolerance of meat, etc., and it has a local soothing action on inflamed mucosa, while the heat induces a healing hyperemia; the lime content may have also a favorable influence on the local repair. It is further possible, he thinks, that the gelatin may check the secretion by the intestine walls of the readily putrefying fluid to which Schmidt ascribes diarrhea. This assumption is sustained by the prompt arrest of diarrhea and rapid transformation of a strongly positive into a negative response to the fermentation test. In the cases reported the course of daily injections lasted from 18 to 28 days; in the one case with complicating cholecystitis he alternated the gelatin with simple hot thermal water injections. Michaelis has applied hot gelatin injections to arrest typhoid hemorrhage and found them entirely harmless. Weil and two other French writers have reported that gelatin by the mouth and subcutaneously proved more effectual than bismuth and tannin in the diarrhea of infants.

Wiener klinische Wochenschrift, Vienna

April 14, XXIII, No. 15, pp. 529-572

90 *Treatment of Pulmonary Tuberculosis with Artificially Induced Pneumothorax. A. Baer and H. Kraus.
91 [illegible] Wassermann Reaction. (Quecksilberwirkung [illegible]) C. Bruck and M. Stern.
92 [illegible] um Emanations. K. v. Klecki.
93 *Ultramicroscopic* Examination of Spermatic Fluid. (Männliche Geschlechtsdrüsensekrete in der Dunkelfeldbeleuchtung.) [illegible]
94 *Special [illegible] cers. (Bericht über das erste Halbj[illegible] zur Behandlung von Unterschenkelgeschwüren.) R. L. Grünfeld.

90. **Treatment of Pulmonary Tuberculosis with Artificially Induced Pneumothorax.**—Baer and Kraus give an illustrated description of the technic applied to induce therapeutic immobilization of the lung in 6 cases. The results showed that this method of treatment may prove successful in a certain class of severe cases in which the physician is otherwise disarmed.

94. **Treatment of Leg Ulcer.**—Grünfeld describes the experiences at the special leg ulcer dispensary opened six months ago by the Vienna Krankenkassen exclusively for treatment of this class of patients. In the majority of cases a zinc oxid stiff dressing was applied in the form of Unna's "Zinkleim." This is a mixture of 75 parts white gelatin dissolved in 250 parts boiling water with 75 parts zinc oxid and 125 parts glycerin.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 31, XXXI, No. 39, pp. 409-416

95 Staining Technic for Spores. (Del comportamento dei batteri e delle spore uccise di fronte alle sostanze coloranti e di un metodo rapido di colorazione delle spore.) A. Missiroli.

April 3, No. 40, pp. 417-432

96 Pain in the Celiac Plexus. (Il dolore celiaco.) A. De Giovanni.
97 *Pseudoleucemia and Inheritance of Cancer. P. Melloni.

April 5, No. 41, pp. 433-440

98 Cancer with Cirrhosis of the Liver. (Cancro cirrosi del fegato.) G. Fabiani.

April 7, No. 42, pp. 441-448

99 Differing Etiology of Rachitis and Osteomalacia. (La clinica e sfavorevole all'unita *etiologica della* rachitide *ed* osteomalacia.) T. Silvestri.

97. **Pseudoleucemia and Inheritance of Cancer.**—The patient was a boy of 7 with fatal pseudoleucemia; his great uncle, grandmother and an uncle had died of cancer. A second cousin also had a lymphosarcoma of the neck.

Policlinico, Rome

April 17, XVII, No. 16, pp. 483-514

100 Epidemic of Mild Typhoid. (Ricerche batteriologiche nell'attuale epidemia di Albano Laziale.) D. De Blasi.

Riforma Medica, Naples

April 4, XXVI, No. 14, pp. 367-392

101 *Effect on Blood Serum of Experimental, Long-Continued Small Doses of Quinin. (Il siero di sangue negli animali chinizzati.) D. De Sandro.
102 Technic for Showing the Capsule of Anthrax Bacilli. (Dimostrazione della capsula del bacillo del carbonchio nelle culture.) G. Fusco.
103 Senile Appendicitis. E. Martini.

April 11, No. 15, pp. 393-420

104 Seroreaction in the Healthy to the Colon and Typhoid Group of Bacteria. S. P. Tria.
105 Operative Treatment of Stab Wounds of the Lungs: *Two* Cases. (Cura delle ferite penetranti del torace con lesione polmonare.) A. Fontana.
106 Case of Primary Sarcoma of the Tongue, *Supposed Thirty-second* on Record. (Sarcoma della lingua.) G. Serafini.

101. **Effect on the Blood of Long-Continued Quinin Prophylaxis.**—De Sandro reports research on dogs given 40 c.c. of quinin for each 70 kilograms of weight, the administration being kept up for from 2 to 4 months. None of the properties of the blood serum seemed to be altered, neither the color, transparency, toxicity, freezing point, proportion of chlorids, sulphates, nitrogen, ash, etc., showed any modification. The only change detected was finally a slight increase in the specific gravity and of the quantity of organic elements so that the dry residuum rose from 0.239 to 0.664 per cent. by the close of the fourth month.

Hygiea, Stockholm

February, LXXII, No. 2, pp. 97-224

107 Ovarian-Tubal Pregnancy. (Ett ovanligt fall af extrauteringraviditet.) A. O. Lindfors and T. J. *Hellman.*
108 *Five Cases of Latent Stenosis of the Pylorus. R. Dahl.

Supplement to Vol. LXXI, pp. 1378-1406

109 *Conclusion of Monograph on Tuberculin Diagnosis of Pulmonary Tuberculosis. (Om Koch's gamla tuberkulin vid kronisk lungtuberkulos ur *praktisk-diagnostisk* synpunkt enligt nyare erfarenhet.) J. *Tillman.*

108. **Latent Stenosis of the Pylorus.**—This condition is liable to be mistaken for a gastric neurosis as the symptoms may all subside after the attack and the patient may feel entirely well during the intervals. The lack of any history of gastric ulcer in some cases is also misleading. The attack of cramp-like pain in the epigastrium resembled the gastric crises of tabes in 2 of Dahl's 5 cases reported in detail. Hyperacidity is the rule for a time at least afterward and some degree of motor insufficiency, but conditions in regard to motor functioning may soon return entirely to normal. The intermittent, periodical character of the attacks and the lack of tenderness in the stomach region during the intervals are characteristic. Oettinger has published a case of the kind entitling it "unrecognized stenosis of the pylorus," but Dahl declares that it is easy to recognize if the above characteristics are borne in mind. The patients have been free from all disturbances since operative treatment, pylorectomy or gastroenterostomy. Three of his patients were 30 or 32 years old, the others were 56 and 70. The attacks had recurred with increasing frequency during from 1 to 9 years before an operation was decided on. In every case, he asserts, cure was instantaneous and complete. One of the younger patients seems to have been cured at the same time of incipient pulmonary tuberculosis.

109. **Tuberculin in Diagnosis of Pulmonary Tuberculosis.**—Tillman's article is accompanied by the tabulated details of 100 cases of chronic pulmonary tuberculosis in all of which the course confirmed the findings of the "old" tuberculin test.

STATE BOARD STATISTICS FOR 1909

THE ANNUAL PRESENTATION OF RESULTS OF STATE BOARD EXAMINATIONS WITH ANALYSES AND DEDUCTIONS

On pages 1740 to 1755 will be found four tables, A, B, C and D, giving in detail the results of the various state medical license examinations held during 1909. Complete reports from Alabama were received for only one of the two examinations held; otherwise our returns are complete.

These tables have been arranged so that, read from left to right, they give the results by colleges, showing how many graduates appeared for examination in each state and whether they passed or failed, as well as the total number examined during the year, the number who passed, the number who failed, the percentage of failures and the number of states in which graduates of each school appeared for examination. Read from above downward, they give the results by states, showing the number registered and rejected from each college, the total number examined, the total number registered, the total number rejected and the percentage of rejections. The fact that the majority of graduates take the license examination in the state in which the college is located is shown by the dark diagonal zone made by the grouping of figures, passing from the left upper to the right lower corner of each table. These tables are worthy of much careful study and many important deductions are possible.

Caution in Forming Conclusions

In making comparisons on the basis of these statistics several factors should be carefully considered. The number examined is important since, if all other conditions are equal, the larger the number of graduates examined, the more accurate is the finding. But other conditions are seldom equal. The number of states in which a school's graduates have been examined is important. The larger this number the more accurate will be the conclusions. Again, the character of the board making the examination and the methods employed are important factors to be considered, since some boards mark severely while others, especially partisan boards, may be very lenient. Finally, in this connection it should be stated that the character of the license examination as usually conducted at the present time is such that graduates of colleges conducted largely by quiz-class methods may easily be successful in passing them. Therefore, the statistics herewith presented should be taken only as part of any investigation of medical schools, although it is an important part.

Graduates of all Years Examined in 1909

Table A shows the results for all candidates who took examinations in 1909 regardless of the years in which they graduated. This shows that altogether 7,287 were examined last year as compared with 7,770 in 1908 and 7,271 in 1907. Of those examined 19.6 per cent. failed, as compared with 21.7 per cent. in 1908, 21.3 per cent. in 1907, and 20.7 per cent. in 1906.

There were 134 of the medical colleges in the United States which had graduates examined. Foreign graduates were examined in 22 states, the total number being 101. The largest number examined in any state was 44 in New York, doubtless because that state has the leading port of immigration. Graduates of Canadian schools were examined in 27 states, more appearing naturally in the border-line states.

Graduates of 1909 Examined During 1909

Table B gives the results for the graduates of 1909 who were examined during the year by state boards and shows that 4,011 or 55 per cent. of all candidates examined during the year graduated in 1909. Educational statistics show that the medical colleges of the United States graduated 4,464 students last year; therefore, about 90 per cent. of all graduates in 1909 took examinations for license during the year. In some of the states graduates in medicine are allowed to serve their hospital internships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 10 per cent. Of those examined 425 or 10.6 per cent. failed. An analysis of this table shows that of all the graduates of 1909 examined, 2,758, or 68.8 per cent., were examined in the states in which the colleges from which they graduated were located. This shows that states which sanction low-grade colleges are not only responsible for the ill-prepared output of such colleges, but are themselves the recipients of the greater portion of such output.

Recent Graduates Examined During 1909

Table C gives the results for graduates of 1905 to 1909 inclusive which were examined during 1909. It includes, therefore, the figures given in Table B. This table is particularly important, since it deals with recent graduates and is, therefore, the fairest basis for comparison between colleges. Any classification of medical colleges from the standpoint of failures at state board examinations should be based on this table. Of all candidates examined in 1909, 5,891 or 80.7 per cent. were recent graduates, and of this number 15.4 per cent. failed, as compared with 19.6 per cent. for all candidates.

Old Practitioners Examined in 1909

Table D is interesting because it shows the results for old practitioners or for those who graduated in 1904 or previously. Of the total number examined in 1909, 958 or 19.3 per cent. were of those who had graduated more than five years previously. This year, of those examined, 288 or 30 per cent. failed, as compared with 15.4 per cent. of failures for recent graduates. This high percentage of failures is probably due chiefly to the long time these candidates have been out of college and to the fact that they are required to take the same examination as recent graduates. Justice to these candidates, most of whom have already been licensed but who for probably good reasons desire to change their locations, is the strongest argument for interstate reciprocity in medical licensure, or for special percentage allowances at the examinations for years of practice. The total number of these candidates will naturally diminish each year as increased reciprocal relations are established, since, as a rule, the states which do not have reciprocal relations with other states (e. g., California, Florida, Washington) examine the largest numbers of old practitioners. A comparison with Table N will be of interest in this connection.

Undergraduates Examined During 1909

Line 138 of Table A shows the number of undergraduates examined in eight states during 1909. Omitting one report from Alabama, for which complete returns were not received, there were 438 non-graduates examined in 1909, of which number 237, or 54.1 per cent., failed. An unusually large number, 153, appeared for examination in Arkansas since it was the last year when non-graduates could appear for the license examination in that state. The same was true in Alabama although unfortunately the complete figures could not be obtained. North Carolina is required by an amendment to its practice act to register non-graduates, who are permitted to practice only in the sparsely settled mountain districts. The open door for these candidates still remains only in Massachusetts, Mississippi and Tennessee, and the percentages of failures in these states this year for non-graduates were respectively, 86.1, 60.0, and 5.0. The largest number registered was 76 in Tennessee.

Study of Totals and Percentages

A study of totals and percentages as compared with previous years is of interest. The totals of those examined show a decrease from last year and the percentage of failures for all candidates is the lowest since 1904.

Total Results

Comparison with Previous Years

	Table A				C		D		A		M	
Year.	Examined.	Total Examined—Passed.	Examined—Failed.	Percentage Failed.	Recent Grads. Examined.	Percentage Failed.	Older Pract. Examined.	Percentage Failed.	Non-Grads. Examined.	Percentage Failed.	Regist'd Without Written Examination.	Total Registered.
1904	7035	5672	1363	19.3	4773	14.1	579	29.7	515	52.6	999	6871
1905	7170	5680	1490	20.8	6054	16.2	690	37.7	472	61.9	394	6074
1906	8035	6368	1667	20.7	6520	16.4	793	27.1	703	51.3	1497	7865
1907	7271	5723	1548	21.3	5922	15.1	675	27.7	674	69.6	1426	7149
1908	7770	6084	1686	21.7	6477	17.8	796	31.5	494	56.8	1276	7360
1909	7287	5856	1430	19.6	5891	15.4	958	30.0	438	54.1	1374	7230

Other deductions from the larger tables have been made and are presented in Tables E to N which are worthy of careful study.

Study of Colleges by State Groups

Table E is based on the first four large tables and gives data regarding the group of colleges located in each state. It shows what states are furnishing the largest numbers of physicians and the failure percentages indicate what kind of training these colleges are furnishing, so far as may be judged from the failures of their graduates before state boards. By comparing the percentages of the first column with the other columns it can be seen whether there has been any reduction in failures for graduates of recent years. Of the 34 states having complete medical colleges, 17 furnished 100 or more candidates examined. Of these 17 groups of colleges, 7 had failure percentages of less than 10 per cent.; 7 had failure percentages between 10 and 20, and 3 had over 20 per cent. of failures. The highest failure percentage was obtained by the Mississippi group. Of the states having 100 or more examined, however, the highest failure percentage was obtained by the Tennessee group, which had 31.0 followed by the Missouri group, with 26.3 per cent. Other deductions are given with the table.

TABLE E.—Colleges Grouped by States

Showing Number Examined and Percentage of Failures

	Graduates.									
	Of 1909.		Of 1905 to 1909.		Of 1904 and Previous.		Of all years.			
All Colleges of	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.	State Rank According to Number Examined.	Rank According to Success at Examinations.
Alabama	6	0.	16	6.3	6	0.	22	4.5	30	5
Arkansas	18	61.1	23	52.2	7	28.6	30	46.7	27	30
California	61	13.1	128	19.5	14	21.4	142	19.8	12	21
Colorado	23	4.4	41	3.2	5	40.0	46	6.5	26	7
Connecticut	9	11.1	26	3.8	2	0.	28	3.6	29	4
District of Columbia	41	12.2	128	21.9	13	23.1	141	22.0	13	22
Georgia	125	9.6	149	16.8	15	26.7	164	17.7	11	18
Illinois	594	9.4	779	13.5	125	32.0	904	16.0	1	16
Indiana	*59*	*0.*	*60*	*0.*	...	....	*60*	*0.*	21	1
Iowa	76	3.9	100	6.0	14	28.6	114	9.6	16	12
Kansas	33	3.0	53	15.1	6	16.7	59	15.3	22	14
Kentucky	170	11.2	262	17.2	30	33.3	292	18.9	7	19
Louisiana	93	7.5	104	7.7	17	11.8	121	8.3	15	9
Maine	*19*	*0.*	28	*3.6*	1	0.	29	3.4	28	3
Maryland	247	15.8	442	19.7	41	19.5	483	19.7	6	20
Massachusetts	100	14.0	190	15.3	36	16.7	226	15.5	9	15
Michigan	139	0.7	163	4.3	32	31.2	195	8.7	10	10
Minnesota	61	13.1	98	16.3	12	16.7	110	16.4	17	17
Mississippi	16	56.2	*21*	*66.7*	...	....	21	66.7	31	31
Missouri	417	17.3	527	24.3	48	47.9	575	26.3	3	26
Nebraska	46	0.	67	5.9	6	50.0	73	9.6	20	12
New Hampshire	6	0.	11	9.1	6	50.0	17	23.5	32	25
New York	306	3.6	504	4.2	43	21.0	547	5.5	5	6
North Carolina	*63*	*14.3*	*89*	22.5	...	....	89	22.5	18	23
Ohio	178	5.6	192	5.7	37	16.2	229	7.4	8	8
Oklahoma	2	0.	3	0.	...	....	3	0.	33	1
Oregon	23	21.8	53	26.4	4	75.0	57	29.8	23	27
Pennsylvania	448	3.4	591	5.1	67	19.3	658	6.5	2	7
South Carolina	36	30.6	40	35.0	6	33.3	46	34.8	26	29
Tennessee	311	21.5	472	30.1	79	40.5	551	31.0	4	28
Texas	*66*	1.5	71	1.4	3	33.3	74	2.7	19	2
Vermont	24	4.2	40	12.5	16	18.7	56	14.3	*24*	*13*
Virginia	96	4.2	123	8.9	3	33.3	126	9.5	14	11
Wisconsin	35	20.0	50	22.0	3	33.3	53	22.6	25	24
Totals Ex'd 1909	3947	10.3	5644	14.7	697	26.5	6341	16.2	..	..

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in Illinois 904 graduates of various years were examined by state boards during 1909, of which number 16 per cent. failed; of the 779 who graduated in recent years (1905 to 1909, inclusive), 13.5 per cent. failed, and of the 125 who graduated previous to 1905, 32 per cent. failed.

The fifth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 904 graduates examined by state boards during 1909, followed by Pennsylvania with 658, Missouri with 575, Tennessee with 551, and New York with 547.

The sixth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of the last two columns. While the Illinois group ranks first according to the number examined, it ranks sixteenth in the success of its graduates at examinations. While the Missouri group ranks third in the number examined, it ranks as the twenty-sixth in the success of the graduates

Study of Larger Colleges

Table F is also based on the four large tables and gives the results of state board examinations as they affect the 44 largest medical colleges. Although these schools represent less than one-third of the medical schools in the United States they furnish nearly two-thirds of all the candidates for license. This table shows that *the graduation of large classes by a medical college does not prove excellence of teaching* since several colleges having 100 or more examined have very high failure percentages, which holds true even for the graduates of 1909. In fact, the larger the college from the standpoint of the number of students and graduates the more serious is inferior teaching ability, indicated by a high failure percentage. In fairness to the medical student, and in the interests of the public, such schools should greatly strengthen their teaching facilities or reduce the size of their classes.

Results for Larger Colleges

Comparison with Previous Years (Table F).

Year.	Colleges Represented.	Total Examined.	Per Cent. Failed.	Colleges, 100 or More Examined.	Total Examined.	Per Cent. Failed.	Colleges, 50 to 100 Examined.	Total Examined.	Per Cent. Failed.	Colleges, Less than 50 Examined.	Total Examined.	Per Cent. Failed.	Foreign and Undergrads. Examined.	Per Cent. Failed.
1904	149	6241	16.4	14	2271	11.7	28	1817	16.9	107	2153	21.0	794	13.1
1905	153	6111	18.3	14	2350	12.4	37	2543	17.7	102	1518	28.9	759	51.1
1906	146	6938	17.3	16	2504	14.5	31	2381	16.9	*96*	*2043*	*21.3*	*1097*	*42.5*
1907	146	6207	13.8	12	1626	12.7	36	2578	14.7	98	2003	13.6	1064	55.5
1908	137	6491	17.2	19	2596	15.6	26	1825	*15.5*	*92*	*2070*	*20.8*	*1279*	*14.6*
1909	149	6341	16.2	17	2476	16.9	27	1920	12.3	90	1945	19.2	946	42.6

Altogether for these schools 653 or 14.9 per cent. failed, as compared with 19.2 per cent. of failures for the 1,945 candidates from the 90 colleges having less than 50 each examined.

Besides the graduates of the medical colleges of the United States, 946 candidates were examined, made up of foreign college graduates, graduates of miscellaneous colleges and nongraduates, of which number 42.6 per cent. failed.

Results in Home States and Elsewhere

Table G is of much interest because it shows the results for *each college of examinations in the state where the college is* located as compared with the results of examinations in other states where there is no possibility of local influence. Of all recent graduates examined in 1909, 3,347 or about 60 per cent. took their license examinations in the state where the colleges from which they graduated were located. Of this number only 10.6 per cent. failed on the average, whereas, of the 2,297 candidates examined in other states, 20.8 per cent. failed. This would indicate that as a rule the students' chances of passing the license examinations are better if he stays in the college's home state. In this connection it is interesting to note that not a single graduate of any one of the Tennessee colleges failed in the Tennessee examinations although of the graduates of these colleges who were examined in other states the failures varied from 18.5 per cent. to 77.7 per cent. or an average of 45.2. The chances for success at home and elsewhere were equal or nearly so in 6 instances while the graduates' chances were better in other than *the home state* in 12 instances.

TOTAL RESULTS FOR FIVE YEARS

Table H shows, so far as reports were obtainable, the number registered and the number rejected in each state for each of the past five years. A comparison of this table with the statistics in the last educational number of THE JOURNAL (Aug. 14, 1909, p. 546), shows what would be expected, that the states having the largest number of medical graduates examine the largest numbers of physicians. In 1905 several states registered all or the majority of their applicants on the presentation of satisfactory credentials without written examinations. Now only one state, New Mexico, will register candidates on presentation of a diploma, without examination. This table shows only those registered by examination. Another table (M) shows the total registration by all methods.

CLASSIFICATION OF COLLEGES

Tables, I, J, K and L give a classification of the medical colleges of the United States on the basis of the failures of their graduates at state board examinations during the past year. This classification is based on the examination of *recent graduates* as shown in Table C. In forming conclusions, the caution already given should be observed, of noting the number examined, the number of states in which representatives appeared and the character of the boards making the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years. Careful investigation shows that a college cannot be considered a high-grade medical school merely because its graduates occasionally show a low percentage of failures at state board examinations. The fact is that several poorly equipped and low-standard colleges appear in the first list. On the other hand, some good schools appear in the second list. For the majority of colleges, however, the classification is fairly accurate.

Table I gives a list of 58 colleges which obtained failure percentages below 10 per cent., 21 of which had no failures whatsoever and 40 had only 5 per cent. or less. The failure percentage for the entire group was 4.3. Table J shows 31 colleges whose failure percentages were between 10 and 20 per cent., of which number 19 had percentages below that for the group, which was 14.4. Table K includes 38 colleges having failure percentages of 20 per cent. and above, of which number 25 had above 30 per cent., 12 had above 40 per cent., and 6 had percentages of 50 per cent. or higher. The average percentage for all candidates from this group of colleges was 35.5.

TABLE F.—COLLEGES HAVING 50 OR MORE EXAMINED

TABLE SHOWS TOTAL NUMBER EXAMINED, PERCENTAGE OF FAILURES AND NUMBER OF STATES IN WHICH EACH COLLEGE HAD REPRESENTATIVES

College.	Graduates, All Years.			Graduates of 1905-1909.			Graduates of 1904 and previous.			Graduates of 1909.			Margin Number.
	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	
University of Louisville, Medical Department	288	19.1	33	260	17.3	32	28	35.7	14	168	11.3	18	45
Northwestern University Medical School	229	6.6	23	203	5.4	21	26	15.4	13	160	3.1	18	34
Jefferson Medical School	202	7.9	39	173	4.6	33	29	27.6	15	123	4.9	23	108
College of Physicians and Surgeons	170	14.7	25	141	11.3	22	29	31.0	14	114	8.8	13	28
University of Pennsylvania, Department of Medicine	155	1.9	25	138	0.7	22	17	11.8	13	101	1.0	11	111
Rush Medical College	142	7.0	21	105	1.0	17	37	24.3	15	74	0.	9	36
Meharry Medical College	136	50.0	18	129	49.5	17	7	57.1	6	69	37.7	12	119
Memphis Hospital Medical College	133	27.8	10	108	27.8	10	25	28.0	7	89	23.6	8	118
Baltimore Medical College	127	30.7	22	124	29.8	21	3	66.7	3	52	19.2	11	50
University of Michigan, Department of Medicine and Surgery	119	8.4	26	92	1.1	17	27	33.3	14	79	1.3	12	62
Barnes Medical College	117	35.0	17	103	33.0	14	14	50.0	6	80	22.5	9	68
Columbia University, College of Physicians and Surgeons	113	4.4	19	103	3.9	18	10	10.0	6	46	2.2	8	82
Tulane University of Louisiana, M	112	4.5	18	97	4.1	13	15	6.7	9	86	3.4	10	47
St. Louis College of Physicians a	112	44.6	17	101	43.6	14	11	54.5	8	75	32.0	8	72
University of Maryland, School c	111	9.9	20	101	8.9	18	10	20.0	8	76	10.5	13	54
Chicago College of Medicine and	110	15.5	17	107	13.1	15	3	100.0	3	97	8.2	10	26
Long Island College	100	11.0	6	96	9.4	4	4	50.0	4	47	10.6	2	86
Medico-Chirurgical Colle	98	5.1	14	89	2.2	11	9	33.3	5	77	2.6	8	109
University and Bellevue	97	3.1	15	86	1.2	8	11	18.1	8	53	0.	2	90
Tufts College Medical School	90	13.3	10	83	13.3	8	7	14.3	5	46	13.0	3	59
St. Louis University School of Medicine	89	10.1	12	88	10.2	12	1	0.	1	67	3.0	6	71
Washington University Medical Department	87	8.0	9	82	6.1	7	5	40.0	3	74	5.4	4	76
University Medical College, Kansas City	86	22.1	15	76	19.7	11	10	40.0	5	58	15.5	5	74
University of Nashville, Medical Department	83	22.9	19	70	17.1	17	13	53.8	10	47	10.6	13	121
State University of Iowa, College of Medicine	81	7.3	10	70	4.3	8	11	27.3	5	51	2.0	4	39
Maryland Medical College	78	38.5	19	69	39.1	16	9	33.3	6	39	35.9	6	53
Western Pennsylvania Medical College	77	9.1	7	74	9.5	5	3	0.	3	56	5.4	3	112
Hahnemann Medical College and Hospital, Philadelphia	75	13.3	17	70	14.3	15	5	0.	5	53	5.7	9	107
University of Minnesota, College of Medicine and Surgery	74	8.1	10	67	8.9	8	7	0.	5	46	6.5	4	64
Harvard Medical School	73	4.1	12	59	3.4	10	14	7.2	5	27	3.7	4	58
Cornell University Medical College	71	0.	9	66	0.	7	5	0.	3	46	0.	6	83
Atlanta School of	68	8.8	4	68	8.8	4	..	....	..	62	9.7	3	20
College of Physician	68	8.8	18	58	10.3	16	10	0.	7	32	6.2	10	51
Johns Hopkins Univ	65	1.5	20	58	1.7	20	7	0.	5	27	3.7	12	52
[illegible]	62	16.1	22	57	17.5	20	5	0.	5	17	5.9	4	16
[illegible]	62	8.1	9	53	7.5	4	9	11.1	9	51	5.9	2	101
[illegible]	60	0.	4	60	0.	4	..	....	..	59	0.	3	37
[illegible]	56	28.6	16	48	25.0	10	8	50.0	7	42	26.2	6	25
[illegible]	56	14.3	14	40	12.5	9	16	18.7	12	24	4.2	6	125
[illegible] University, Medical	55	7.3	7	54	7.4	6	1	0.	1	48	4.2	5	132
Hahnemann Medical College	54	33.3	15	48	31.2	13	6	50.0	4	16	18.7	7	18
Atlanta College of Physicians and Surgeons	53	26.4	15	41	22.0	13	12	41.7	6	21	23.8	6	29
Creighton Medical College	51	13.7	11	43	10.4	5	8	25.0	8	40	10.0	4	19
[illegible]	51	7.8	14	46	2.2	12	5	60.0	3	29	0.	5	77
Totals	4396	14.9	16	3904	13.3	13	492	27.0	7	2744	9.4	8	

This table is especially interesting, since it gives data relating to the 44 larger medical colleges arranged according to the number of graduates examined. This allows of comparisons between colleges having classes of nearly equal size. This time the University of Louisville Medical Department had the largest number examined, which place was held in 1908 by Jefferson Medical College and in the three previous years by the College of Physicians and Surgeons of Chicago.

Of the 17 colleges having 100 or more examined, only 8 have failure percentages of less than 10, while 5 stand out prominently with large failure percentages of 27.8, 30.7, 35.0, 44.6 and 50.0. This marked difference holds even in respect to recent graduates (of 1905 to 1909, inclusive).

Of the 27 colleges having between 50 and 100 graduates examined, 15 had failure percentages less than 10; 6 had failure percentages between 10 and 20 and 6 had failure percentages above 20, the 3 highest having 28.6, 33.3 and 38.5 per cent.

The average percentage of failures for these larger colleges for graduates of 1904 and previous years, was 27.0; for graduates of 1905 to 1909 inclusive (recent graduates), 13.3; for graduates of 1909, 9.4 and for graduates of all years, 14.9. Of the 44 colleges, 29 obtained failure percentages below the average. Of the 6,849 college graduates examined by state boards in 1909, these larger schools furnished 4,396, or 64.2 per cent.

TABLE G—Comparison of Results in Home States and Elsewhere. Based on Table C.

College	Total Examined.	Results in Home State. Passed.	Results in Home State. Failed.	Results in Home State. Per Cent. Failed.	Results in Other States. Passed.	Results in Other States. Failed.	Results in Other States. Per Cent. Failed.
ALABAMA	16	....	...	....	15	1	6.3
Birmingham Medical College	6	....	...	....	5	1	16.7
University of Alabama	10	....	...	....	10	0	0.
ARKANSAS + 7.8	23	4	7	63.6	7	5	71.4
Coll. of Physicians and Surgeons	7	1	2	66.7	2	2	50.0
University of Arkansas	16	3	5	62.5	5	3	37.5
CALIFORNIA — 5.4	128	86	22	20.4	17	3	15.0
California Eclectic Medical College	2	1	1	50.0	....	...	....
College of Phys. and Surgs., Los Angeles	9	4	2	33.3	3	0	0.
Coll. of Phys. and Surgs., San Francisco	25	13	6	30.0	5	1	16.7
Cooper Medical College	29	24	2	7.7	3	0	0.
Hahnemann Medical College	13	7	5	41.7	1	0	0.
Oakland College of Medicine and Surgery	3	3	0	0.	....	...	....
University of California	14	9	0	0.	3	2	40.0
University of Southern California	33	25	6	19.4	2	0	0.
COLORADO — 4.2	41	23	1	4.2	17	0	0.
Denver and Gross College of Medicine	31	18	1	5.3	12	0	0.
University of Colorado	10	5	0	0.	5	0	0.
CONNECTICUT —11.1	26	8	1	11.1	17	0	0.
Yale Medical School	26	8	1	11.1	17	0	0.
DISTRICT OF COLUMBIA —20.2	128	30	16	34.8	70	12	14.6
George Washington University	57	20	9	31.0	27	1	3.6
Georgetown University	23	2	1	33.3	18	2	10.0
Howard University	48	8	6	42.8	25	9	26.5
GEORGIA +17.4	149	92	12	11.5	32	13	28.9
Atlanta College of Phys. and Surg.	43	30	4	11.8	8	1	11.1
Atlanta School of Medicine	68	43	5	10.4	19	1	5.0
Georgia Coll. of Eclectic Med. and Surg.	1	....	...	....	0	1	100.0
Medical College of Georgia	37	19	3	13.6	5	10	66.7
ILLINOIS + 5.7	779	475	63	11.7	199	42	17.4
American Medical Missionary College	10	....	...	....	10	0	0.
Bennett Medical College	48	29	9	23.7	7	3	30.0
Chicago College of Medicine and Surg.	107	81	7	8.0	12	7	36.8
Coll. of Med. and Surg., Physio-Medical	9	4	5	55.6	....	...	....
College of Phys. and Surg., Chicago	141	91	6	6.2	34	10	22.7
Hahnemann Medical College and Hosp.	41	16	5	23.8	16	4	20.0
Hering Medical College	7	6	0	0.	1	0	0.
Illinois Medical College	40	22	7	24.1	7	4	36.3
Jenner Medical College	29	17	10	37.0	0	2	100.0
National Medical University	19	8	6	42.8	3	2	40.0
Northwestern University Medical School	203	121	2	1.6	71	9	11.2
Reliance Medical College	20	14	6	30.0	....	...	....
Rush Medical College	105	66	0	0.	38	1	2.6
INDIANA	60	55	0	0.	5	0	0.
Indiana University	60	55	0	0.	5	0	0.
IOWA + 0.3	100	64	4	5.9	30	2	6.2
Drake University	22	18	2	10.0	1	1	50.0
University of Iowa (R)	70	43	2	4.4	24	1	4.0
University of Iowa (H)	8	3	0	0.	5	0	0.
KANSAS +27.1	53	29	1	3.3	16	7	30.4
Kansas Medical College	25	20	1	4.8	2	2	50.0
University of Kansas	28	9	0	0.	14	5	26.3
KENTUCKY + 6.4	262	91	14	13.3	126	31	19.7
Louisville National Medical College	1	....	...	....	1	0	0.
Southern Homeopathic Medical College	1	1	0	0.	....	...	....
University of Louisville	260	90	14	13.5	125	31	19.9
LOUISIANA + 6.4	104	57	3	5.0	39	5	11.4
Flint Medical College	7	2	2	50.0	1	2	66.7
Tulane University of Louisiana	97	55	1	1.8	38	3	7.3
MAINE — 5.3	28	18	1	5.3	9	0	0.
Medical School of Maine	28	18	1	5.3	9	0	0.
MARYLAND — 2.6	442	91	25	21.6	264	62	19.0
Atlantic Medical College	23	....	...	....	19	4	17.4
Baltimore Medical College	124	13	7	35.0	74	30	28.8
College of Phys. and Surg., Baltimore	58	13	0	0.	39	6	13.3
Johns Hopkins University	58	15	0	0.	42	1	2.3
Maryland Medical College	69	8	11	57.9	34	16	32.0
University of Maryland	101	40	4	9.1	52	5	8.8
Woman's Medical College	9	2	3	60.0	4	0	0.
MASSACHUSETTS — 2.9	190	109	21	16.2	52	8	13.3
Boston University	23	14	1	6.7	7	1	12.5
College of Phys. and Surg., Boston	25	4	11	73.3	7	3	30.0
Harvard Medical School	59	38	1	2.6	19	1	5.0
Tufts College Medical School	83	53	8	13.1	19	3	13.6
MICHIGAN +12.8	163	118	1	0.8	38	6	13.6
Detroit College of Medicine	43	36	0	0.	4	3	42.9
Detroit Homeopathic College	6	5	0	0.	0	1	100.0
University of Michigan (R)	92	62	0	0.	29	1	3.3
University of Michigan (H)	22	15	1	6.3	5	1	16.7
MINNESOTA — 2.8	98	58	12	17.1	24	4	14.3
University of Minnesota (R)	67	46	3	6.1	15	3	16.7
Hamline University	31	12	9	42.9	9	1	10.0
MISSISSIPPI —73.7	21	5	14	73.7	2	0	0.
Mississippi Medical College	21	5	14	73.7	2	0	0.
MISSOURI + 3.2	527	170	49	22.4	229	79	25.6
American Medical College	4	3	0	0.	1	0	0.
Barnes Medical College	103	31	14	31.1	38	20	34.5
Ensworth Medical College	42	7	3	30.0	21	11	34.4
Kansas City Hahnemann Medical Coll.	20	1	2	66.7	13	4	23.5
St. Louis University	88	40	1	2.4	39	8	17.0
St. Louis College of Phys. and Surg.	101	16	14	46.7	41	30	42.3
University of Missouri	6	3	0	0.	3	0	0.
University Medical College, Kansas City	76	26	12	31.6	35	3	7.9
Western Eclectic Coll. of Med. and Surg.	5	....	...	....	4	1	20.0
Washington University	82	43	3	6.5	34	2	5.6
NEBRASKA +10.7	67	43	1	2.3	20	3	13.0
Creighton Medical College	46	26	1	3.7	19	0	0.
Lincoln Medical College	11	8	0	0.	0	3	100.0
University of Nebraska	10	9	0	0.	1	0	0.
NEW HAMPSHIRE —16.7	11	5	1	16.7	5	0	0.
Dartmouth Medical School	11	5	1	16.7	5	0	0.
NEW YORK + 0.4	504	420	18	4.1	63	3	4.5
Albany Medical College	37	31	3	8.8	3	0	0.
Columbia University, Coll. of P. and S.	103	78	2	2.5	21	2	8.7
Cornell University Medical College	66	55	0	0.	11	0	0.
Eclectic Medical College, New York	12	10	1	9.1	1	0	0.
Fordham University, School of Medicine	10	10	0	0.	....	...	....
Long Island College Hospital	96	82	9	9.9	5	0	0.
New York Homeo. Med. Coll. and Hosp.	20	11	1	8.3	7	1	12.5
N. Y. Med. Coll. and Hosp. for Women	4	4	0	0.	....	...	....
Syracuse University	39	33	1	2.9	5	0	0.
University and Bellevue Hosp. Med. Coll.	86	77	1	1.3	8	0	0.
University of Buffalo	31	29	0	0.	2	0	0.
NORTH CAROLINA +22.7	89	36	4	10.0	33	16	32.7
Leonard School of Medicine	47	10	3	23.1	21	13	38.2
North Carolina Medical College	25	14	0	0.	9	2	18.1
University of North Carolina	17	12	1	7.7	3	1	25.0
OHIO + 0.4	192	150	9	5.7	31	2	6.1
d Surg.	19	16	0	0.	3	0	0.
College.	10	7	0	0.	3	0	0.
Eclectic Medical College	14	4	1	20.0	8	1	11.1
Medical College of Ohio	32	28	0	0.	4	0	0.
Miami Medical College	22	14	4	22.2	4	0	0.
Pulte Medical College	6	4	0	0.	2	0	0.
Starling-Ohio Medical College	53	47	3	6.0	2	1	33.3
Toledo Medical College	6	5	1	16.7	....	...	....
Western Reserve University	30	25	0	0.	5	0	0.
OKLAHOMA	3	3	0	0.	....	...	....
Epworth College of Medicine	3	3	0	0.	....	...	....
OREGON —24.8	53	27	13	32.5	12	1	7.7
Willamette University	26	11	7	38.9	8	0	0.
University of Oregon	27	16	6	27.3	4	1	20.0
PENNSYLVANIA + 5.3	591	351	11	3.0	210	19	8.3
Hahnemann Medical College and Hosp.	70	39	2	4.9	21	8	26.7
Jefferson Medical College	173	80	1	1.2	85	7	7.6
Medico-Chirurgical Coll. of Philadelphia	89	68	1	1.4	19	1	5.0
Temple University, Medical Department	22	19	1	5.0	2	0	0.
University of Pennsylvania	138	73	0	0.	64	1	1.5
Western Pennsylvania Medical College	74	57	6	9.5	10	1	9.1
Woman's Med. College of Pennsylvania	25	15	0	0.	9	1	10.0
SOUTH CAROLINA — 1.8	40	24	13	35.1	2	1	33.3
Medical College of South Carolina	40	24	13	35.1	2	1	33.3
TENNESSEE +45.2	472	158	0	0.	172	142	45.2
Chattanooga Medical College	33	19	0	0.	5	9	64.3
College of Phys. and Surg., Memphis	11	5	0	0.	3	3	50.0
Knoxville Medical College	15	6	0	0.	2	7	77.7
Memphis Hospital Medical College	108	28	0	0.	50	30	37.5
Meharry Medical College	129	28	0	0.	37	64	63.4
Tennessee Medical College	22	17	0	0.	2	3	60.0
University of Nashville	70	26	0	0.	32	12	27.3
University of Tenessee	31	9	0	0.	18	4	18.2
University of West Tennessee	12	6	0	0.	1	5	83.3
Vanderbilt University	41	14	0	0.	22	5	18.5
TEXAS — 1.4	71	68	1	1.4	2	0	0.
Baylor University	13	13	0	0.	....	...	....
Fort Worth University	12	12	0	0.	....	...	....
Southwestern University	9	8	1	11.1	....	...	....
University of Texas	37	35	0	0.	2	0	0.
VERMONT +23.8	40	19	0	0.	16	5	23.8
University of Vermont	40	19	0	0.	16	5	23.8
VIRGINIA + 2.3	123	78	7	8.2	34	4	10.5
Medical College of Virginia	42	31	3	8.8	8	0	0.
University of	27	13	3	18.7	10	1	9.1
University Coll	54	34	1	2.9	16	3	15.8
WISCONSIN	50	27	10	27.0	12	1	7.7
Marquette University	30	14	9	39.1	6	1	14.3
Wisconsin College of Phys. and Surg.	20	13	1	7.2	6	0	0.
Totals +10.2	5644	2992	355	10.6	1820	477	20.8

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. This shows frequently that the graduates of certain schools have a better chance of passing the examination in the state in which they are located than they have elsewhere. This should always be considered in making comparisons between colleges. A college having an exceedingly low standard, by having all its graduates examined in the home state, may thus show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures shows the differerences between the percentages of examinations in the home state and the examinations elsewhere. The plus sign indicates that graduates have better chances of success in the state where the college is located; the minus sign indicates that the chances are better elsewhere. The most marked variation this year is seen in the results for the Tennessee colleges.

In Table L have been placed a number of colleges in regard to which data were insufficient to allow of fair comparison.

A comparison of the classification this year with those of previous years shows an increase in the number of colleges having less than 10 per cent. of failures and a decrease in those having above 20 per cent.

CLASSIFICATION OF COLLEGES

Comparison with Previous Years (Tables I, J, K, L)

	Colleges Having Less than 10 Per Cent.	Colleges Having 10 to 20, Per Cent.	Colleges Having Above 20 Per Cent.	Unclassified Colleges.	Total Colleges.
1904	47	27	38	37	149
1905	45	22	40	46	153
1906	62	24	43	20	149
1907	64	27	39	18	148
1908	48	29	46	15	138
1909	58	31	38	7	134

TABLE II.—PHYSICIANS EXAMINED BY STATE BOARDS, 1905 TO 1909, INCLUSIVE

State.	1905		1906		1907		1908		1909					
	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Total Examined.	Registered.	Rejected.	Percentage Rejected.
Alabama*	131	22	138	22	142	38	66	66	7	20	652	484	168	25.8
Arizona	35	7	35	4	29	2	36	4	19	6	177	154	23	13.0
Arkansas*	88	58	152	73	72	106	120	85	111	131	996	543	453	45.5
California	144	127	190	44	118	84	145	96	184	73	1,205	781	424	35.2
Colorado	283	54	...	...	50	6	52	14	36	15	510	421	89	17.5
Connecticut	66	17	84	28	64	17	67	16	52	13	424	333	91	21.4
Delaware	20	8	11	1	4	2	11	0	19	2	78	65	13	16.7
Dist. of Columbia	67	23	63	34	59	37	53	36	46	21	439	288	151	34.4
Florida	24	3	66	7	72	8	79	10	70	12	351	311	40	11.4
Georgia	...	...	164	5	139	22	150	14	143	28	665	596	69	10.4
Idaho	46	15	42	12	38	7	52	16	54	23	305	232	73	23.9
Illinois	759	36	748	69	580	52	646	96	645	117	3,748	3,378	370	9.9
Indiana	249	63	228	12	172	17	172	7	102	3	1,025	923	102	10.0
Iowa	205	30	166	29	146	26	139	43	98	14	896	754	142	15.7
Kansas	163	29	180	27	125	14	116	18	121	20	813	705	108	13.3
Kentucky	38	4	52	13	48	19	107	61	120	18	480	365	115	24.0
Louisiana	105	15	133	14	153	7	145	29	121	33	755	657	98	13.0
Maine	68	3	80	8	74	4	92	11	55	10	405	369	36	8.9
Maryland	120	75	112	44	139	41	132	71	130	33	897	633	264	29.4
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,725	1,221	504	29.2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	674	647	27	4.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	629	474	155	24.3
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,505	694	811	53.9
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,227	828	399	32.5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	314	208	106	33.7
Nebraska	87	29	58	25	68	14	103	16	74	8	482	390	92	19.1
Nevada	[illegible]	[illegible]	2	0	10	1	17	0	9	0	39	38	1	2.6
[illegible]	[illegible]	[illegible]	34	17	19	11	37	16	20	10	184	125	59	32.1
[illegible]	[illegible]	[illegible]	80	13	73	15	89	17	76	12	447	373	74	16.5
New Mexico	...	...	...	...	5	3	30	2	11	4	55	46	9	16.4
New York	705	51	629	56	691	54	679	73	566	72	3,576	3,270	306	8.6
North Carolina	92	40	87	41	111	20	95	26	111	18	641	496	145	22.6
North Dakota	72	7	60	10	49	4	52	10	41	6	311	274	37	11.9
Ohio	213	8	222	16	179	9	182	6	192	13	1,040	988	52	5.0
Oklahoma	53	28	95	28	...	...	34	10	92	44	384	274	110	28.6
Oregon	68	66	65	56	62	56	43	63	95	50	624	333	291	46.7
Pennsylvania	[illegible]	98	519	73	465	54	485	49	474	27	2,784	2,483	301	10.8
[illegible]	[illegible]	19	54	30	36	23	29	17	23	10	288	189	99	34.4
[illegible]	[illegible]	22	39	13	41	17	47	21	46	33	323	217	106	32.8
[illegible]	[illegible]	11	26	11	23	5	58	6	60	21	262	208	54	20.6
[illegible]	[illegible]	35	150	96	133	140	213	87	277	4	1,221	859	362	29.6
Texas	117	73	159	53	187	64	143	23	181	19	1,019	787	232	22.8
Utah	[illegible]	8	37	7	26	0	27	5	28	4	174	150	24	13.8
[illegible]	[illegible]	1	35	0	40	7	45	6	38	2	217	201	16	7.4
[illegible]	[illegible]	50	123	35	124	33	128	53	136	40	862	651	211	24.5
[illegible]	[illegible]	34	137	45	163	38	182	60	148	49	997	771	226	22.7
[illegible]	[illegible]	95	84	72	92	9	102	18	105	10	696	492	204	29.3
[illegible]	[illegible]	5	52	2	62	5	80	7	56	13	377	345	32	8.5
[illegible]	[illegible]	1	12	3	7	5	7	2	12	0	61	50	11	18.0
Totals	7,596		8,035		7,271		7,770		7,287		37,959	.....	.....	....
Registered	6,042		6,368		5,723		6,084		5,857		.....	30,074	.....	....
Rejected	1,534		1,667		1,548		1,686		1,430		.....	.....	7,885	....
Percent. Rej	20.5		20.7		21.3		21.7		19.6		.....	.....	.....	20.8

This table gives the number of candidates registered by examination by each state during each of the last five years, as well as the number rejected. The last four columns give the totals for the five years and the percentage rejected by each state. One 1909 report for Alabama was incomplete, so the figures could not be included.

Four states registered over 1,000 candidates by examination, these being Illinois, Massachusetts, New York and Pennsylvania. Over 3,000 were registered in Illinois and New York.

The highest percentage of rejections was 53.9 in Mississippi, followed by Oregon, Arkansas and California, with 46.7, 45.5 and 35.2, respectively. The states marked with an asterisk (*) included non-graduates among those examined, and for that reason would be expected to have higher percentages rejected.

The lowest failure percentages were in Nevada, 2.6; Michigan, 4.0; Ohio, 5.0; Vermont, 7.4 and Wisconsin, 6.9.

TABLE I.*—COLLEGES HAVING LESS THAN 10 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1909. BASED ON TABLE C.

College	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ALABAMA					
University of Alabama, Medical Department	10	10	0	0.	4
CALIFORNIA					
Cooper Medical College	29	27	2	6.9	2
Oakland College of Medicine and Surgery	3	3	0	0.	1
COLORADO					
Denver and Gross College of Medicine	31	30	1	3.2	9
University of Colorado, School of Medicine	10	10	0	0.	4
CONNECTICUT					
Yale Medical School	26	25	1	3.8	7
GEORGIA					
Atlanta School of Medicine	68	62	6	8.8	4
ILLINOIS					
American Medical Missionary College	10	10	0	0.	4
Hering Medical College	7	7	0	0.	2
Northwestern University Medical School	203	192	11	5.4	21
Rush Medical College	105	104	1	1.0	17
INDIANA					
Indiana University, School of Medicine	60	60	0	0.	4
IOWA					
State University of Iowa, College of Med.	70	67	3	4.3	8
State University of Iowa, Homeo. Dept.	8	8	0	0.	5
LOUISIANA					
Tulane University, Medical Department	97	93	4	4.1	13
MAINE					
Medical School of Maine	28	27	1	3.6	3
MARYLAND					
Johns Hopkins University, Medical Dept.	58	57	1	1.7	26
University of Maryland, School of Med.	101	92	9	8.9	18
MASSACHUSETTS					
Boston University, School of Medicine	23	21	2	8.7	8
Harvard Medical School	59	57	2	3.4	10
MICHIGAN					
Detroit College of [illegible]	43	40	3	7.0	5
Univ. of Michigan, [illegible]	92	91	1	1.1	17
University of Michi[illegible]	22	20	2	9.1	5
MINNESOTA					
Univ. of Minnesota, Coll. of Med. and Surg.	67	61	6	8.9	8
MISSOURI					
American Medical College	4	4	0	0.	2
University of Missouri, Medical Department.	6	6	0	0.	4
Washington University, Medical Department.	82	77	5	6.1	7
NEBRASKA					
John A. Creighton Medical College	46	45	1	2.2	12
University of Nebraska, College of Medicine	10	10	0	0.	2
NEW HAMPSHIRE					
Dartmouth Medical School	11	10	1	9.1	5
NEW YORK					
Albany Medical College	37	34	3	8.1	4
Columbia Univ., Coll. of Phys. and Surg.	103	99	4	3.9	18
Cornell University Medical College	66	66	0	0.	7
Eclectic Medical College of New York	12	11	1	8.3	2
Fordham University School of Medicine	10	10	0	0.	1
Long Island College [illegible]	96	87	9	9.4	4
Syracuse University, [illegible]	39	38	1	2.6	6
University and Bellev[illegible]	86	85	1	1.2	8
University of Buffalo, Medical Department	31	31	0	0.	2
NORTH CAROLINA					
North Carolina Medical College	25	23	2	8.0	6
OHIO					
Cleveland College of Phys. and Surg.	19	19	0	0.	4
Cleveland Homeopathic Medical College	10	10	0	0.	4
Medical College of Ohio	32	32	0	0.	4
Pulte Medical College	6	6	0	0.	2
Starling-Ohio Medical College	53	49	4	7.5	4
Western Reserve University, Medical Dept.	30	30	0	0.	3
PENNSYLVANIA					
Jefferson Medical College	173	165	8	4.6	33
Medico-Chirurgical College of Philadelphia	89	87	2	2.2	11
Temple University, Medical Department	22	21	1	4.5	3
University of Pennsylvania, Dept. of Med.	138	137	1	0.7	22
Western Pennsylvania Medical College	74	67	7	9.5	5
Woman's Medical College of Pennsylvania	25	24	1	4.0	9
TEXAS					
Baylor University, College of Medicine	13	13	0	0.	1
Fort Worth University, Medical Department	12	12	0	0.	1
University of Texas, Department of Med.	37	37	0	0.	2
VIRGINIA					
Medical College of Virginia	42	39	3	7.1	5
University College of Medicine	54	50	4	7.4	6
WISCONSIN					
Wisconsin College of Physicians and Surg.	20	19	1	5.0	5
Totals	2743	2627	116	4.3	

* See remarks in the text regarding this classification of colleges.

Total Registration in 1909

The tables thus far described have referred to candidates registered by examination only. Table M, however, shows the totale number registered in each state, including those registered by examination, by reciprocity, and under various exemption clauses. Above 100 were registered in 28 different states, above 200 in 9 and above 400 in 3, the largest numbers being registered in Illinois with 686, in New York with 616 and in Pennsylvania with 474 and in Tennessee with 311. Nongraduates were registered in eight states, the largest numbers being 76 in Tennessee, 57 in Mississippi and 52 in Arkansas. Altogether 7,230 candidates were licensed during 1909.

TABLE J.—Colleges Having Between 10 and 20 Per Cent. of Failures Before State Boards in 1909
Based on Table C.

College	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ALABAMA					
Birmingham Medical College	6	5	1	16.7	5
CALIFORNIA					
University of California, Medical Dept	14	12	2	14.3	5
Univ. of Southern California, Coll. of Med.	33	27	6	18.2	3
DISTRICT OF COLUMBIA					
George Washington University	57	47	10	17.5	20
Georgetown University, School of Medicine	23	20	3	13.0	11
GEORGIA					
Atlanta College of Physicians and Surg	43	38	5	10.4	5
ILLINOIS					
Chicago College of Medicine and Surgery	107	93	14	13.1	15
College of Physicians and Surgeons	141	125	16	11.3	22
IOWA					
Drake University, College of Medicine	22	19	3	13.6	3
KANSAS					
Kansas Medical College	25	22	3	12.0	4
University of Kansas, School of Medicine	28	23	5	17.9	6
KENTUCKY					
University of Louisville Medical Department	260	215	45	17.3	32
MARYLAND					
Atlantic Medical College	23	19	4	17.4	6
College of Physicians and Surgeons	58	52	6	10.3	16
MASSACHUSETTS					
Tufts College Medical School	83	72	11	13.3	8
MICHIGAN					
Detroit Homeopathic College	6	5	1	16.7	2
MISSOURI					
St. Louis University, School of Medicine	88	79	9	10.2	12
University Medical College	76	61	15	19.7	11
NEW YORK					
New York Homeo. Med. Coll. and Hosp.	20	18	2	10.0	5
NORTH CAROLINA					
University of North Carolina, Med. Dept.	17	15	2	11.8	4
OHIO					
Eclectic Medical Institute	14	12	2	14.3	5
Miami Medical College	22	18	4	18.2	3
Toledo Medical College	6	5	1	16.7	1
PENNSYLVANIA					
Hahnemann Medical College	70	60	10	14.3	15
TENNESSEE					
Tennessee Medical College	22	19	3	13.6	5
University of Nashville, Medical Department	70	58	12	17.1	17
University of Tennessee, Dept. of Medicine	31	27	4	12.9	9
Vanderbilt University, Medical Department.	41	36	5	12.2	14
TEXAS					
Southwestern University, Medical College	9	8	1	11.1	1
VERMONT					
University of Vermont, College of Med.	40	35	5	12.5	9
VIRGINIA					
University of Virginia, Dept. of Medicine	27	23	4	14.8	9
Totals	1482	1268	214	14.4	

TABLE L.—Unclassified Colleges

College	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
C[illegible] Eclectic Medical College	2	1	1	50.0	1
[illegible] c Med. and Surg.	1	0	1	100.0	1
[illegible] Eclectic, Atlanta	..	..	...	.....	..
[illegible] l College	1	1	0	0.	1
[illegible] Medical College	1	1	0	0.	1
New York Med. Co[illegible] Hosp. for Women	4	4	0	0.	1
Epworth College of Medicine	3	3	0	0.	1
Totals	12	10	2	16.7	

Table N gives those registered without examination on presentation of satisfactory credentials, which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same courtesy by the state issuing the original license. The term does not well describe this method of registration, however, since some state boards consider it more fair to the physician to accept his credentials, if satisfactory, whether the state board issuing the original license returns the favor or not. Had not reciprocal relations been established by the 33 states shown in the table, 1,167 physicians, the majority of whom have been in practice for many years, would have been compelled to undergo the ordeal of a second trying examination.

In Conclusion

In the publication of these statistics, our endeavor has been to give an absolutely fair presentation of facts, a knowledge of which is always beneficial. Without question this annual presentation of the results of state licensing examinations has had a most helpful influence on medical education and medical licensure in this country. We reiterate our acknowledgements to the state licensing boards whose ready cooperation and complete reports have made the publication of these data possible.

TABLE K.—Colleges Having Over 20 Per Cent. of Failures Before State Boards in 1909. Based on Table C.

College	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ARKANSAS					
College of Physicians and Surgeons	7	3	4	57.1	3
University of Arkansas, Medical Dept	16	8	8	50.0	4
CALIFORNIA					
College of Phys. and Surg., Los Angeles	9	7	2	22.2	4
College of Phys.and Surg., San Francisco	25	18	7	28.0	4
Hahnemann Medical College of the Pacific.	13	8	5	38.4	2
DISTRICT OF COLUMBIA					
Howard University, Medical Department	48	33	15	31.2	13
GEORGIA					
Medical College of Georgia	37	24	13	35.1	7
ILLINOIS					
Bennett Medical College	48	36	12	25.0	10
College of Medicine and Surgery—Ph.M	9	4	5	55.6	1
Hahnemann Medical College	41	32	9	22.0	13
Illinois Medical College	40	29	11	27.5	9
Jenner Medical College	29	17	12	41.4	3
National Medical University	19	11	8	42.1	6
Reliance Medical College	20	14	6	30.0	1
LOUISIANA					
Flint Medical College	7	3	4	57.1	3
MARYLAND					
Baltimore Medical College	124	87	37	29.8	21
Maryland Medical College	69	42	27	39.1	16
Woman's Medical College of Baltimore	9	6	3	33.3	5
MASSACHUSETTS					
College of Physicians and Surgeons	25	11	14	56.0	6
MINNESOTA					
Hamline University, Medical Department	31	21	10	32.3	6
MISSISSIPPI					
Mississippi Medical College	21	7	14	66.7	3
MISSOURI					
Barnes Medical College	103	69	34	33.0	14
Ensworth Medical College	42	28	14	33.3	8
Kansas City Hahnemann Medical College	20	14	6	30.0	8
St. Louis College of Physicians and Surg.	101	57	44	43.6	14
Western Eclectic College of Med. and Surg.	5	4	1	20.0	1
NEBRASKA					
Lincoln Medical College	11	8	3	27.3	4
NORTH CAROLINA					
Leonard Medical College	47	31	16	34.0	12
OREGON					
Willamette University, Medical Department	26	19	7	26.9	4
University of Oregon, Medical Department	27	20	7	25.9	4
SOUTH CAROLINA					
Medical College of State of South Carolina	40	26	14	35.0	3
TENNESSEE					
Chattanooga Medical College	33	24	9	27.3	8
College of Physicians and Surg., Memphis	11	8	3	27.3	5
Knoxville Medical College	15	8	7	46.7	5
Memphis Hospital Medical College	108	78	30	27.8	10
Meharry Medical College	129	65	64	49.5	17
University of West Tennessee, Med. Dept	12	7	5	41.7	5
WISCONSIN					
Marquette University, Medical Department	30	20	10	33.3	7
Totals	1407	907	500	35.5	

TABLE M.—REGISTRATION BY STATE BOARDS DURING 1909

States.	By Examination.			By Reciprocity.	Without Written Exam. or Under Exemption.	Total Registered.
	Graduates, 1905-1909.	Graduates, 1904 and Previous.	Non-Graduates.			
Alabama	64	5	10	......	......	79
Arizona	8	11	......	......	......	19
Arkansas	57	12	52	2	12	125
California	132	52	......	......	......	181
Colorado	31	5	......	140	......	176
Connecticut	40	12	......	2	......	54
Delaware	17	2	......	1	......	20
District of Columbia	39	7	......	11	......	57
Florida	50	20	......	......	......	70
Georgia	131	9	......	6	......	149
Idaho	26	28	......	......	......	54
Illinois	624	21	......	41	......	686
Indiana	96	6	......	42	......	144
Iowa	96	2	......	83	......	181
Kansas	108	13	......	98	......	219
Kentucky	113	7	......	17	......	137
Louisiana	107	14	......	11	......	132
Maine	47	8	......	12	......	67
Maryland	126	4	......	31	7	168
Massachusetts	182	26	5	......	......	213
Michigan	135	5	......	43	5	188
Minnesota	86	4	......	68	......	158
Mississippi	60	13	57	......	......	130
Missouri	206	6	......	......	......	212
Montana	39	29	......	......	......	68
Nebraska	70	4	......	54	......	128
Nevada	8	1	......	8	......	17
New Hampshire	15	5	......	2	......	22
New Jersey	65	11	......	40	......	116
New Mexico	4	7	......	......	84	95
New York	524	42	......	42	8	616
North Carolina	96	8	7	13	......	124
North Dakota	27	14	......	34	......	75
Ohio	186	6	......	55	......	247
Oklahoma	64	28	......	58	......	150
Oregon	61	33	1	......	......	95
Pennsylvania	455	19	......	......	......	474
Rhode Island	19	4	......	......	......	23
South Carolina	46	0	......	6	......	52
South Dakota	46	14	......	......	......	60
Tennessee	191	10	76	16	18	311
Texas	138	43	......	95	......	276
Utah	26	2	......	16	......	44
Vermont	29	9	......	4	......	42
Virginia	126	9	1	12	......	148
Washington	88	60	......	......	......	148
West Virginia	99	6	......	......	......	105
Wisconsin	49	7	......	82	......	138
Wyoming	8	4	......	22	......	34
Totals	5046	674	209	1167	131	7230

This table shows the total number registered during 1909 in each state by the various methods. The first column shows the recent graduates registered, the second column, the old practitioners (graduates of 1904 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few "old practitioners." The chief exception is New York, which has arranged reciprocal relations with only six other states. The fifth column shows those registered without written examination under various exemption clauses. The last column shows the total number of physicians registered in each state during the year. The figures for Alabama are complete here, but one of the two reports could not be included in the other tables, since the list of failures was not sent in.

TABLE N.—PHYSICIANS REGISTERED THROUGH RECIPROCITY BY STATE EXAMINING BOARDS DURING 1909

State Board of	egistered by State 'Thro' ocity.	a	ns		nia	o	icut	e	Columbia					Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	West Virginia	Wisconsin	Wyoming	U. S. Army	Foreign
Arkansas	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	140	2	1	1	..	..	1	..	1	1	..	1	27	5	14	8	2	..	1	..	1	5	2	..	9	6	..	..	..	5	13	1	..	12	4	6	1	..	1	2	1	1	1	1	..	2	1	..	..
	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..
	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Illinois	41																		2	..	..	3	2	..	..	2	1	..	1	..	..	..	..	6	..	..	..	..	..	2	..	1	..	..	2	4	..	..	..
Indiana	42	..	..	..	..	..	..	..	..	..	4	..	14	..	1	..	2	..	..	1	..	7	..	..	2	1	..	1	..	..	..	..	..	7	..	..	..	..	..	3	..	..	..	..	..	2	..	..	..
Iowa	83	..	..	..	..	..	..	..	..	..	..	..	50	1	..	6	..	..	..	..	..	3	2	1	1	11	..	..	..	1	..	..	..	1											1	4	..	..	..
Kansas	98	..	..	..	..	5	..	1	..	..	1	..	33	9	7	..	6	..	1	1	..	4	1	..	..	13	..	..	2	..	..	..	..												1	8	..	..	2
Kentucky	17	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	1	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..												2	..	..	..	..
Louisiana	11	..	..	..	..	1	..	..	..	..	..	..	3	..	..	1	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Maine	12	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..
	31	..	..	..	..	..	..	..												..	..	1	..	..	2	..	..	..	..	..	..	..	..	3	..	..	..	2	..	..	1	..	..	3	6	2	..	..	..
	43	..	..	..	1	..	1	..												1	..	..	1	..	1	..	..	..	..	..	3	..	..	5															
	68	..	..	..	..	..	..	..	..	..	..	..	20	3	12	3	..	..	1	..	..	6	..	..	2	1	..	..	2	..	..	..	4																
	54	..	..	..	..	..	..	..	..	..	..	..	10	..	19	10	..	..	..	1	..	..	1	..	4	..	..	..	..	..	..	..	..																
	8	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	..									3																							
	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..																																
	40	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..																																
New York	42																																																
North Carolina	13																																										10						
North Dakota	34																					..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	4	..	..	..	1	..
Ohio	55																					1	12	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
	58	..	..	..	..	..	..	..	..	..	..	..	21	2	..	8	1	..	..	4	..	5	..	..	..	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	..	..	..	10	1	..	..	..
	6																1	..	..	..	..	..	..	..	13	1	..	..	..	1	..	..	..	..	..	..	..	..	..	7	..	..	..	1	2	1	..	..	..
	16																								..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	..	..	..
Texas	95																								..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Utah	16																								..	4	..	1	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	7	1	..	..	..
Vermont	4																								..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
Virginia	12																											2	1	..																			
Wisconsin*	82																											1	1	..																			
Wyoming	22	..	..	..	..	..	..	..	..	..	..	..	3	1	3	1	..	..	..	..	..	..	..	..	..	8	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	2	1	..	..	..	..
Total received from each state through reciprocity	1167	2	1	2	1	12	2	1	13	1	10	1	320	46	77	41	30	2	18	25	3	51	35	1	58	53	2	8	29	7	59	7	5	47	5	7	1	7	1	21	4	4	24	26	36	46	2	3	4

* For six candidates, the names of states where original licenses were granted, were not obtained.

This table shows the number of physicians registered by each state through reciprocity during 1909. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including licenses, regardless as to whether the state issuing the original license reciprocates with those states or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 42 applicants through reciprocity during 1909, of which number 7 came from Michigan, 19 from New Jersey, 3 from Ohio and 13 from Vermont. Reading from above downward, the table shows that 59 physicians left New York during 1909 and registered in other states under the reciprocity provision, of which number 13 registered in Colorado, 1 in Connecticut, 1 in [illegible] gan, 28 in New Jersey, 1 in North Carolina, 11 in Ohio and 1 in Vermont. Colorado leads, having registered [illegible] gh reciprocity, followed by Kansas which registered 98, Texas with 95, Iowa with 83 and Wisconsin with [illegible] to note in what states the original licenses were issued. The table shows that of the 1,167 applicants registered [illegible] 320 or 27.4 per cent. obtained their original licenses in Illinois, the states furnishing the three next highest numbe [illegible] 7, New York with 59 and Missouri with 58.

Altogether 1,167 licenses were issued through reciprocity in 1909, an increase of 75 over 1908, 178 over 1907 and 482 over 1906.

TABLE A.—PHYSICIANS EXAMINED BY STATE

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																											
1	Birmingham Medical College.—R.																																											1
2	University of Alabama, Med. Dept.—R	1	0			1	0											4	0	2	0			1	0																			2
	ARKANSAS																																											
3	College of Physicians and Surg.—R.					1	2																											2	1									3
4	Univ. of Arkansas, Med. Dept.—R.					4	5																	0	1									3	2									4
	CALIFORNIA																																											
5	California Eclectic Med. College.—E.							1	1																																			5
6	College of P. and S., Los Angeles.—R.			1	0			4	2																																			6
7	Coll. of P. and S., San Francisco.—R.							15	8																																			7
8	Cooper Medical College.—R.							24	3																																			8
9	Hahnemann Med. Coll. of Pacific.—H.							8	5																																			9
10	Oakland Coll. of Med. and Surg.—R.							3	0																																			10
11	Univ. of California, Med. Dept.—R.							9	0																																			11
12	Univ. of Southern California.†—R.							26	6																																	1	0	12
	COLORADO																																											
13	Denver and Gross Coll. of Med.—R.							3	0	18	1															1	0			1	0													13
14	Univ. of Colorado, Med. Dept.—R.							1	0	5	0											3	1																					14
	CONNECTICUT																																											
15	Yale Medical School.—							2	0			8	1					1	0					1	0															3	0			15
	DISTRICT OF COLUMBIA																																											
16	George Washington University.—R.															21	9	1	0	1	0			2	0			2	0	1	0							4	1					16
17	Georgetown Univ., School of Med.—R.			1	0							2	1			2	1																			1	0			3	0			17
18	Howard University, Med. Dept.—R.					2	0					0	1			9	7							1	0					1	0							6	1	5	3			18
	GEORGIA																																											
19	Atlanta College of Phys. and Surg.—R			1	0													3	1	31	4																							19
20	Atlanta School of Medicine.—R.																	12	1	43	5																							20
21	Georgia Coll. of Eclectic M. & S.—E.																																											21
22	Hospital Medical College, Atlanta.—E.																																											22
23	Medical College of Georgia.—R.					0	3	1	1									2	0	19	3													0	1					0	1			23
	ILLINOIS																																											
24	American Med. Missionary College.—R.							1	0																																	7	0	24
25	Bennett Medical College.—R.			1	0	1	0			0	1											0	1	29	9	1	0			1	1	1	0											25
26	Chicago Coll. of Med. and Surg.—R.									0	1							2	0			1	0	81	7	1	0	0	2															26
27	College and Med. and Surg.—Ph.M.																							4	5																			27
28	College of Phys. and Surg.—R.							4	3							1	0	1	0	1	0	2	0	93	7	2	0	4	0	2	1	1	0									1	0	28
29	Hahnemann Med. Coll. and Hosp.—H.					1	0	4	3			0	2									0	1	16	6			3	0	2	0									2	0	1	0	29
30	Hering Medical College.—H.																							6	0	1	0																	30
31	Illinois Medical College.—R.					1	0																	22	7	2	0																	31
32	Jenner Medical College.—R.																							17	10	0	1																	32
33	National Medical University.—P.	0	1																					8	6	1	0																	33
34	Northwestern Univ. Med. School.—R.			1	0			7	1													3	2	122	3	3	0	5	0	2	0	1	0									2	0	34
35	Reliance Medical College.—R.																							14	6																			35
36	Rush Medical College.—R.					1	0	6	3	1	0											7	0	67	0			2	1	1	0											1	0	36
	INDIANA																																											
37	Indiana Univ., School of Med.—R.																									55	0			1	0													37
	IOWA																																											
38	Drake Univ., College of Medicine.—R.																							0	1			18	2															38
39	State Univ. of Iowa, Coll. of Med.—R					1	0	3	2													3	0	1	0			43	2															39
40	State Univ. of Iowa, Homeo. Dept.—H			1	0																							3	0															40
	KANSAS																																											
41	Kansas Medical College.—R.											1	0																	20	1			1	0									41
42	Univ. of Kansas, School of Med.—R.							1	0													0	1							9	0													42
	KENTUCKY																																											
43	Louisville National Med. College.—R																															1	0											43
44	Southwestern Homeo. Med. Coll.—H.																									1	0					1	0											44
45	Univ. of Louisville, Med. Dept.—R.			2	0	3	1	2	3	0	1	1	0					2	1	1	0			9	4	15	1			4	2	92	14	3	1							3	1	45
	LOUISIANA																																											
46	Flint Medical College.—R.					1	1																											2	2									46
47	Tulane University, Med. Dept.—R.					5	0	1	0									3	0					1	0					1	0			57	1									47
	MAINE																																											
48	Medical School of Maine.—R.																																			19	1			8	0			48
	MARYLAND																																											
49	Atlanta Medical College.—P.											0	1	2	0	1	0																			3	1							49
50	Baltimore Medical Colege.—R.							1	1	1	1	3	1	1	0	1	1			2	0															2	2	13	7	16	15			50
51	College of Phys. and Surg.—R.			2	0							2	0			0	1	3	0	1	0	1	0															14	0	4	1			51
52	Johns Hopkins Univ., Med. Dept.—R.							2	0	2	0	1	0			1	0			1	0			3	0	2	0	2	0									17	0	2	0			52
53	Maryland Medical College.—R.					1	0			0	1	1	1	0	1	0	1			2	0			1	0									1	1	5	0	8	11	0	2			53
54	Univ. of Maryland, School of Med.—R							1	2	1	0			2	0	1	0	2	0	3	0					2	0											40	4					54
55	Woman's Med. Coll. of Baltimore.—R.																											1	0									2	3					55
	MASSACHUSETTS																																											
56	Boston Univ. School of Medicine.—H.	0	1					1	0			0	1																							3	0			15	1			56
57	College of Phys. and Surgeons.—R.																			1	0															5	3			5	11			57
58	Harvard Medical School.—R.							7	1			3	0																							2	0			38	1			58
59	Tufts College Medical School.—R.							1	1			1	0																							6	0			55	8			59
	MICHIGAN																																											
60	Detroit College of Medicine.—R.																					4	0																			36	0	60
61	Detroit Homeopathic College.—H.																																									5	0	61
62	Univ. of Mich., Dept. of M. and S.—R.	1	0	2	1			2	4	1	0					2	0	1	0			2	0			1	0									1	0	1	0			63	0	62
63	Univ. of Michigan, Homeo. College.—H							1	2																					1	0											16	1	63
	MINNESOTA																																											
64	Univ. of Minn., Coll. of M. & S.—R.							3	1													2	0																	0	1			64
65	Hamline University, Med. Dept.—R.																																											65
	MISSISSIPPI																																											
66	Mississippi Medical College.—R.																	1	0																									66
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. In	Margin Number
	Minnesota		Mississippi		Missouri		Montana		Nebraska		Nevada		New Hampshire		New Jersey		New Mexico		New York		North Carolina		North Dakota		Ohio		Oklahoma		Oregon		Pennsylvania		Rhode Island		South Carolina		South Dakota		Tennessee		Texas		Utah		Vermont		Virginia		Washington		West Virginia		Wisconsin		Wyoming							
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1			1	0																							2	0	1	0					0	1					1	0															6	5	1	16.7	5	1
2			5	0													1	0																					1	0																	16	16	0	0.	8	2
3																											0	1																													7	3	4	57.1	3	3
4																											3	2													3	0															23	13	10	43.5	5	4
5																																																	1	0							3	2	1	33.3	2	5
6	1	0									1	0																																													9	7	2	22.2	4	6
7											2	0																	2	0											1	0							2	1							31	22	9	29.0	5	7
8																																																	3	0							30	27	3	10.0	2	8
9							1	0																																																	14	9	5	35.7	2	9
10																																																									3	3	0	0.	1	10
11							1	0			1	0			0	1			0	1											2	0																	3	0							18	16	2	11.1	7	11
12									1	0																																															34	28	6	17.6	3	12
13																			1	0					1	0			1	0													2	0					1	0					3	0	33	32	1	3.0	10	13
14																													1	1													1	0													13	11	2	15.4	5	14
15																			9	0											1	0	2	0																							28	27	1	3.6	8	15
16							2	0			1	0							1	0	1	0	1	0					2	0	1	0	1	0			1	0					1	0	1	0	2	0	3	0	1	0	1	0			62	52	10	16.1	22	16
17																			2	1					1	0					4	0															1	0	1	0	4	0					25	22	3	12.0	11	17
18					1	1									1	1															0	2			1	1	0	1			1	0					6	0			2	0					54	36	18	33.3	15	18
19			0	1																	3	0					1	0	0	1					1	0			1	0	2	0							1	0							51	44	7	13.7	11	19
20																					5	0																	2	0																	68	62	6	8.8	4	20
21			0	1	1	0											0	1																							3	0															6	4	2	33.3	4	21
22																																																														22
23																	1	0																	2	5																					39	25	14	35.9	8	23
24							1	1											1	0									1	0																											12	11	1	8.3	5	24
25	0	1					1	1											0	1			1	0			0	1			2	0													1	0			1	0							56	40	16	28.6	16	25
26			1	0			0	1	0	1																	0	2	0	1	2	0					2	0	1	0	1	0							0	2	1	0					110	93	17	15.5	17	26
27																																																	0	1							10	4	6	60.0	2	27
28	0	2	1	0	2	0	4	0	0	2									2	1			1	0	1	0	4	1	5	4							8	1			1	0							1	2			3	1			170	145	25	14.7	25	28
29							1	0											3	1																																					53	39	14	26.4	15	29
30																																																									9	8	1	11.1	4	30
31							1	1											0	2																					0	1							1	0							44	30	14	31.8	11	31
32																																									1	0							0	1							30	18	12	40.0	4	32
33			0	1																											1	0							1	0																	19	11	8	42.1	6	33
34	8	2			1	0	6	0	2	0													3	0			4	0	5	2	2	0					9	2	1	0			11	1					10	1			4	1	2	0	229	214	15	6.6	23	34
35																																																									20	14	6	30.0	1	35
36	3	0	2	0	5	0	4	0			1	0											1	0	1	0			6	2	1	0					8	2			2	0	3	0					9	2							142	132	10	7.0	21	36
37																									3	0															1	0															60	60	0	0.	4	37
38					1	0	1	0																					0	1																											24	20	4	16.7	5	38
39																							8	0					1	0							10	1	1	0									4	1							81	75	6	7.3	10	39
40							0	1																			1	0	2	0							1	0																			9	8	1	11.1	6	40
41																	1	0									2	1	1	1																			0	1							30	26	4	13.3	7	41
42					8	4																			1	0	4	0	1	0																											29	24	5	17.2	7	42
43									1	0																																															2	2	0	0.	2	43
44																																																									2	2	0	0.	2	44
45	0	1	4	0	5	1	1	0							1	1			2	0	2	0	1	0	1	0	10	6	1	2	7	2			1	1	1	0	11	0	13	0	1	1			4	5	2	1	28	5					288	233	55	19.1	33	45
46			0	2																							1	0																													9	4	5	55.6	4	46
47			8	1	1	0	2	0																	1	0	2	1	1	0							1	0	1	0	19	1					2	0	0	1					1	0	112	107	5	4.5	18	47
48													1	0																																											29	28	1	3.4	3	48
49																																2	0	1																							24	19	5	20.8	6	49
50																																0	4	4	0	1					2	0			1	0	5	1	1	2	5	0					127	88	39	30.7	22	50
51																																0	2	1							1	0					3	0			14	0					68	62	6	8.8	15	51
52															[illegible]	1			[illegible]	0	2	0									7	0									[illegible]	[illegible]					2	0	2	0	1	0	4	0			65	64	1	1.5	20	52
53					0	1							0	2													1	0			11																5	8			10	1					78	48	30	38.5	19	53
54	1	0							2	0									2	0	12	1									9																5	2	1	0	3	0					111	100	11	9.9	20	54
55			1	0																	1	0									1	0															1	0									10	7	3	30.0	6	55
56	1	0											3	0																																			1	0							31	28	3	9.7	12	56
57																																													2	1	0	1	1	0							32	15	17	53.1	8	57
58	2	0					1	0					1	0																															1	0			1	1							73	70	3	4.1	12	58
59													4	0																																			2	2							90	78	12	13.3	10	59
60					0	1																									1	0																	0	2							44	41	3	6.8	5	60
61																																																	0	1							6	5	1	16.7	2	61
62	1	0			2	0	7	0							0	1	1	0			1	0	1	0	2	0	0	1	2	0	4	0	1	0			1	1					2	0					7	2							119	109	10	8.4	26	62
63					1	0																			2	0			1	0													1	0													26	23	3	11.5	7	63
64	46	3					1	0															4	0					1	0							8	0											2	1			1	0			74	68	6	8.1	10	64
65	12	10					3	0	1	0													4	2																									2	0			2	0			36	24	12	33.3	6	65
66			5	14																																			1	0																	27	7	14	66.7	3	66
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE A.—PHYSICIANS EXAMINED BY

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	MISSOURI																																											
67	American Medical College.—E.																					0	1																					67
68	Barnes Medical College.—R.					2	1	1	0	0	1							1	1			4	5	26	9					3	0													68
69	Ensworth Medical College.—R.					1	0			0	1											1	0							12	8													69
70	Kansas City Hahnemann Medical College.—H.					1	0															0	1			1	0			10	1													70
71	St. Louis University, School of [illegible]					[illegible]	[illegible]															2	2	28	0					1	0													71
72	St. Louis College of Phys. and [illegible]																							30	18	2	1	2	2	1	1													72
73	University of Missouri, Medical [illegible]																							1	0			1	0															73
74	University Medical College, Kans[illegible]																					1	0	0	1			1	0	29	1													74
75	Western Eclectic Coll. of Med. a[illegible]																													4	1													75
76	Washington University, Med. Department.—R.							2	1															30	1	1	0	1	0															76
	NEBRASKA																																											
77	John A. Creighton Medical College.—R.							1	1													1	0					1	0	2	0													77
78	Lincoln Medical College.—E.									0	1							1	0											0	1													78
79	University of Nebraska, College of Med.—R.																																											79
	NEW HAMPSHIRE																																											
80	Dartmouth Medical School.—R.							1	0																											1	0			3	1			80
	NEW YORK																																											
81	Albany Medical College.—R.													1	0																									1	1			81
82	Columbia Univ. Coll. of Phys. and Surg.—R.							1	0			3	0							1	0			1	0															4	1			82
83	Cornell University Medical College.—R.							2	0			4	0			1	0																							2	0			83
84	Eclectic Med. Coll., of City of New York.—E.											1	0																															84
85	Fordham University, School of Medicine.—R.																																											85
86	Long Island College Hospital.—R.											3	0									0	1																	1	1	1	0	86
87	New York Homeo. Med. Coll. and Hosp.—H.							1	1			4	0																	1	0									1	0			87
88	N. Y. Med. Coll. and Hosp. for Women.—H.																																											88
89	Syracuse University, College of Medicine.—R.											1	0			1	0																							1	0			89
90	University and Bellevue Hosp. Med. Coll.—R.	1	0									2	0					1	0			1	0			1	0													1	0			90
91	University of Buffalo, Medical Dept.—R.							1	0																																			91
	NORTH CAROLINA																																											
92	Leonard School of Medicine.—R.	0	1															5	0	5	2																	1	0	0	1			92
93	North Carolina Medical College.—																	4	0	2	1																							93
94	*University of North Carolina, Med. Dept.—R.*																					1	0																					94
	OHIO																																											
95	Cleveland College of Phys. and Surgs.—R.																																											95
96	[illegible] Medical College.—H.																																											96
97	[illegible]																					1	1	1	0							1	0									1	0	97
98	[illegible]			1	0													2	0	1	0	2	0	1	0							3	0											98
99	[illegible]																															3	0											99
100	[illegible]																															2	0	1	0									100
101	[illegible]							1	0									1	0			1	0					1	0															101
102	[illegible]																																											102
103	Western Reserve University, [illegible]																																											103
	OKLAHOMA																																											
[illegible]	Epworth College of Medicine.—R.																																											104
	OREGON																																											
[illegible]	Willamette University, Medical Dept.—R.			0																																								105
106	University of Oregon, Medical Dept.—R.							0	1																																			106
	PENNSYLVANIA																																											
107	Hahnemann Med. College and Hospital.—H.							1	1			1	0	3	0	1	0													1	0			1	0					2	1			107
108	[illegible] Medical College.—R.			1	1			4	5			1	1	3	0	1	0	2	0	2	0	1	0	2	0	1	0	1	0			1	0			2	0	4	0	2	0	1	0	108
109	[illegible]ge of Philadelphia.—R.							1	1			1	0	1	1							1	0															1	0	1	0			109
110	[illegible]lical Department.—R.																																					1	0					110
111	[illegible] Dept. of Med.—R.	1	0					3	0			1	0	5	0	1	1	1	0					1	0	2	0											13	1	3	0			111
112	Western Pennsylvania Medical College.—R.											0	1															1	0															112
113	Woman's Med. Coll. of Pennsylvania.—R.							1	0							1	0													1	0									3	0			113
	SOUTH CAROLINA																																											
114	Med. Coll. of the State of So. Carolina.—R.			1	0													1	1	1	0			0	1																			114
	TENNESSEE																																											
115	Chattanooga Medical College.—R.			0	1													1	0	3	1	1	1																					115
116	College of Phys. and Surgs., Memphis.—R.					0	1																											1	0									116
117	Knoxville Medical College.—																			0	2									0	1													117
118	Memphis Hospital Medical [illegible]																			2														[illegible]	[illegible]									118
119	Meharry Medical College.—[illegible]	0	1			0	[illegible]											2	2	11																								119
120	Tennessee Medical College.—[illegible]																					0	1																					120
121	University of Nashville, Med[illegible]																		0			0	1	5	0							2	0	8	3									121
122	University of Tennessee, Dept. of Med.—R.					[illegible]	[illegible]												0	1	0			0	1							0	1	5	0									122
123	University of West Tennessee, Med. Dept.—R.					0	2											0	1	0	2																							123
124	Vanderbilt University, Medical Department.—R.	1	0			3	0	0	1											1	0			1	1							2	0	2	0									124
	TEXAS																																											
125	Baylor University, College of Medicine.—[illegible]																																											125
126	Fort Worth University, Medical Dept.—R.					1	0																																					126
127	Southwestern University Medical College.—R.																																											127
128	University of Texas, Dept. of Medicine.—R.																																											128
	VERMONT																																											
129	University of Vermont, College of Med.—R.							2	2			3	1					0	1																					10	1			129
	VIRGINIA																																											
130	Medical College of Virginia.—[illegible]																																							1	0			130
131	University of Virginia, Dept. [illegible]																																						0					131
132	University College of Medicine.—R.																																						1	0	2			132
	WISCONSIN																																											
133	Marquette University, Medical Dept.—R.																											1	0															133
134	Wisconsin College of Phys. and Surgs.—R.																											1	0															134
135	Canadian Colleges					1	0	5	0	2	0	2	0			1	0	1	0			3	0	6	1			1	0							2	2	1	0	9	5			135
136	Foreign Colleges							3	2			1	1					1	0					5	3					1	0					0	1			6	2	1	0	136
137	Miscellaneous Medical Colleges	0	2	2	1	6	0	6	4	5	2	1	0	1	0			5	3	4	1	4	3	6	6	6	0	3	5	6	0	7	1	8	2	3	0	3	4	1	3			137
138	Undergraduates	2	13			52	101																																	5	31			138
	Totals by States	27		25		242		257		51		65		21		67		82		171		77		762		105		112		141		138		154		65		163		208		142		
	[illegible]	7		19		111		184		36		52		19		46		70		143		54		645		102		98		121		120		121		55		130		213		140		
	[illegible]	20		6		131		73		15		13		2		21		12		28		23		117		3		14		20		18		33		10		33		95		2		
	Percentage of Failures	74.1		24.0		54.1		28.4		29.4		20.0		9.5		31.3		14.6		16.4		29.9		15.4		2.9		12.5		14.2		13.0		21.4		15.4		20.2		30.8		1.4		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.
* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
67					3	0																	1	1																	1	0															7	5	2	28.6	4	67
68	0	1			31	14	0	3	1	1													1	0			3	1	1	2							0	2			1	0							1	0							117	76	41	35.0	17	68
69					7	3			7	1																	1	0																					0	2							44	29	15	34.1	8	69
70					1	2	0	1																			0	1																					1	0							20	14	6	30.0	8	70
71	1	1			40	1	0	1											1	0							3	2	0	1																			2	1			1	0			89	80	9	10.1	12	71
72			0	1	16	15																	1	0			1	2	2	2	1	0					0	1			3	3	1	0					1	2							112	62	50	44.6	17	72
73					3	0			1	0																	0	1	1	0																											8	7	1	12.5	6	73
74					26	12	1	2	1	0	1	0															1	1			1	0									1	0							2	1							86	67	19	22.1	15	74
75																																																									5	4	1	20.0	1	75
76					43	3	1	1																													0	1	1	0									1	0							87	80	7	8.0	9	76
77	1	0			1	0	1	0	26	1									0	1							1	0									3	0											7	1			1	0	1	0	51	47	4	7.8	14	77
78					0	1			8	0																																															12	9	3	25.0	5	78
79									9	0																																							1	0							10	10	0	0.	2	79
80													5	2					1	1													2	0																							17	13	4	23.5	6	80
81															1	0			31	3							1	0																													39	35	4	10.3	5	81
82	1	0	1	0	1	0	1	1							2	0			81	3	1	0			1	0					3	0			1	0			2	0	1	0							1	0			1	0			113	108	5	4.4	19	82
83			1	0											3	0			55	0													2	0											1	0											71	71	0	0.	9	83
84																			10	1																					1	0															13	12	1	7.7	3	84
85																			10	0																																					10	10	0	0.	1	85
86																			82	9																									2	0											100	89	11	11.0	6	86
87															1	0			11	2											2	0																									24	21	3	12.5	7	87
88																			4	0																																					4	4	0	0.	1	88
89																			33	1							1	0			1	0																									39	38	1	2.6	6	89
90							1	0					1	0	1	0			78	1			2	0			1	0	1	1															1	0			1	1							97	94	3	3.1	15	90
91															1	0			29	2									1	0	2	0																	1	0							37	35	2	5.4	6	91
92			0	1																	10	3					0	1			2	1			0	4											6	2			2	0					47	31	16	34.0	12	92
93																					14	0					1	0							2	0					0	1															25	23	2	8.0	6	93
94																					12	1							0	1									2	0																	17	15	2	11.8	4	94
95																			1	0					16	0					1	0							1	0																	19	19	0	0.	4	95
96																									7	0	1	0			1	0																	1	0							10	10	0	0.	4	96
97																			1	0					4	1	0	1			3	0																	1	0	3	1					20	16	4	20.0	10	97
98							1	0																	28	1	1	0															1	0					1	0							43	42	1	2.3	11	98
99																									14	4			3	0																											24	20	4	16.7	3	99
100																									4	0			1	1																			2	0							11	10	1	9.1	5	100
101																									48	3			1	1	1	1																			2	0			1	0	62	57	5	8.1	9	101
102																									5	1																							2	0							8	7	1	12.5	2	102
103																			2	0					25	0					3	0																									32	31	1	3.1	4	103
104																											3	0																													3	3	0	0.	1	104
105							1	0			1	0																	11	8																			6	1							29	19	10	34.5	5	105
106																													10	6																			4	0							28	21	7	25.0	4	106
107	1	0	0	1											7	1			2	3					3	0	1	0			39	2					0	1							1	0					1	0					75	65	10	13.3	17	107
108	4	3	1	0	1	0	4	1	3	0					15	1			9	1	8	0	2	0	6	0	2	0	2	1	80	1	2	0	1	0					1	0	4	0	1	0	1	0	5	1	3	0	1	0	1	0	202	186	16	7.9	39	108
109															8	0			2	2					2	0			1	0	68	1															1	0	2	0	3	0					98	93	5	5.1	14	109
110																															19	1																			1	0					22	21	1	4.5	3	110
111			1	0	2	0	1	0							13	0			10	0	4	0			3	0	0	1	1	0	74	0					1	0	1	0							3	0	6	0			1	0			155	152	3	1.9	25	111
112							1	0											1	0											57	6																	1	0	9	0					77	70	7	9.1	7	112
113									1	0					1	0			2	1									1	0	15	0															1	0	1	0							29	28	1	3.4	11	113
114																			1	0											1	0			24	14											1	0									46	30	16	34.8	8	114
115			1	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	0	1	1					1	3			1	2					44	31	13	29.5	11	115
116			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5	0	1	0															11	8	3	27.3	5	116
117			0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	0																	16	8	8	50.0	6	117
118			22	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	1									29	0	10	4					0	2									133	96	37	27.8	10	118
119			1	15	4	7															0	1			0	1	4	1							2	3			28	0	5	3					0	1									136	68	68	50.0	18	119
120																					3	1					0	1	0	1									17	0									0	2	1	1					28	21	7	25.0	7	120
121			4	6	0	1											2	0			1	2					3	1							2	1			27	0	3	2					1	0	0	1	1	0					83	64	19	22.9	19	121
122			2	2					1	0							1	0			2	1							1	0									9	0	4	0					0	1	1	0							39	33	6	15.4	15	122
123																											1	0											6	0																	12	7	5	41.7	5	123
124			3	1	1	0									1	0			1	0							5	0							1	0			14	0	7	1							1	1							49	44	5	10.2	16	124
125																																									13	0															13	13	0	0.	1	125
126																																									12	0															13	13	0	0.	2	126
127																																									8	1															9	8	1	11.1	1	127
128																											3	1													35	0															39	38	1	2.6	2	128
129							1	0					1	3	2	0			1	0									2	0	1	0									1	0			22	0			1	0	1	0					56	48	8	14.3	14	129
130																			0	1	3	0													1	0											31	3			3	0					43	39	4	9.3	6	130
131			1	1																							1	0																			13	3	1	0	3	0	1	0			28	24	4	14.3	10	131
132																					14	0																									34	1	1	0	1	0					55	51	4	7.3	7	132
133							1	1											1	0			2	0																									1	0			15	10			33	22	11	33.3	7	133
134							1	0															3	0					1	0																			1	0			13	1			20	19	1	5.0	5	134
135	2	1					5	1					1	0	3	0			22	0			2	1	4	0			2	2	3	0	3	3			2	1							2	1	0	1	14	1			2	0			121	101	20	16.5	27	135
136	1	0					2	1					0	1	3	3			19	25					1	0			1	1	5	1	0	1							2	0	0	1			1	0	3	0			1	0			101	57	44	43.6	22	136
137	3	0	6	4	3	2	5	5	9	2	1	0	1	1	2	2	1	2	2	1	1	3	1	2	2	0	11	10	7	2	5	5			0	1	3	6	11	0	12	1	0	1	1	0	5	6	8	9	1	0	2	0	3	0	286	184	102	30.0	46	137
138			57	85																	7	0							1	3									76	4							1	0									438	201	237	54.1	8	138
	115		284		282		91		82		9		30		88		15		638		129		47		205		136		145		501		33		79		81		281		200		32		40		176		197		115		69		12		7287					
	90		130		212		68		74		9		20		76		11		566		111		41		192		92		95		474		23		46		60		277		181		28		38		136		148		105		56		12			5857				
	25		154		70		23		8		0		10		12		4		72		18		6		13		44		50		27		10		33		21		4		19		4		2		40		49		10		13		0				1430			
	21.7		54.2		24.8		25.3		9.8		0.		33.3		13.6		26.7		11.3		14.0		12.8		6.3		32.4		34.5		5.4		30.3		41.8		25.9		1.4		9.5		12.5		5.0		22.7		24.9		8.7		18.8		0.					19.6		
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE B.—GRADUATES OF 1909 EXAMINED

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																											
1	Birmingham Medical College.—R.																																											1
2	University of Alabama, Medical Department.—R.																	2	0	1	0																							2
	ARKANSAS																																											
3	College of Physicians and Surgeons.—R.					1	2																											2	1									3
4	University of Arkansas, Medical Dept.—R.					2	5																	0	1									1	1									4
	CALIFORNIA																																											
5	California Eclectic Medical College.—E.							0	1																																			5
6	College of P. and S., Los Angeles.—R.			1	0			2	0																																			6
7	College of P. and S., San Francisco.—R.							2	1																																			7
8	Cooper Medical College.—R.							18	1																																			8
9	Hahnemann Medical College of Pacific.—H.							2	3																																			9
10	Oakland College of Medicine and Surgery.—R.							3	0																																			10
11	University of California, Medical Dept.—R.							5	0																																			11
12	University of Southern California.†—R.							13	2																																	1	0	12
	COLORADO																																											
13	Denver and Gross College of Medicine.—R.							1	0	13	1																																	13
14	University of Colorado, Medical Dept.—R.									5	0											1	0																					14
	CONNECTICUT																																											
15	Yale Medical School.—R.											5	1											1	0															1	0			15
	DISTRICT OF COLUMBIA																																											
16	George Washington Univ., Dept. of Med.—R.															11	1																					3	0					16
17	Georgetown University, School of Medicine.—R.											1	0			1	1																							1	0			17
18	Howard University, Medical Department.—R.					1	0									1	2																					3	0	0	1			18
	GEORGIA																																											
19	Atlanta College of Physicians and Surgeons.—R.																	2	0	30	4																							19
20	Atlanta School of Medicine.—R.																	8	1	43	5																							20
21	Georgia College of Eclectic M. and S.—E.																																											21
22	Hospital Medical College, Atlanta.—E.																																											22
23	Medical College of Georgia.—R.																			19	2																							23
	ILLINOIS																																											
24	American Medical Missionary College.—R.																																									6	0	24
25	Bennett Medical College.—R.					1	0			0	1													27	9					0	1													25
26	Chicago College of Medicine and Surgery.—R.																	2	0					79	5	1	0	0	2															26
27	College of Medicine and Surgery.—Ph.M.																							3	3																			27
28	College of Physicians and Surgeons.—R.							2	1															89	5	1	0	4	0	2	0	1	0									1	0	28
29	Hahnemann Medical College and Hospital.—H.											0	2									0	1	13	2			1	0	1	0													29
30	Hering Medical College.—H.																							6	0	1	0																	30
31	Illinois Medical College.—R.																							19	2	1	0																	31
32	Jenner Medical College.—R.																							13	3																			32
33	National Medical University.—P.																							6	3																			33
34	Northwestern University Medical School.—R.							2	0													1	1	119	2	3	0	2	0	1	0	1	0									1	0	34
	Reliance Medical College.—R.																							14	6																			35
	Rush Medical College.—R.							3	0	1	0													63	0																	1	0	36
	INDIANA																																											
	ndiana University, School of Medicine.—R.																									55	0																	37
	IOWA																																											
	Drake University, College of Medicine.—R.																							0	1			18	1															38
39	State University of Iowa, College of Med.—R.																											43	1															39
40	State University of Iowa, Homeo. Dept.—H.																											3	0															40
	KANSAS																																											
41	Kansas Medical College.—R.																													17	1													41
42	University of Kansas, School of Medicine.—R.							1	0																					6	0													42
	KENTUCKY																																											
43	Louisville National Medical College.—R.																																											43
44	Southwestern Homeopathic Medical College.—H.																															1	0											44
45	University of Louisville, Medical Dept.—R.			1	0	1	0											1	0					8	2	11	0			3	1	81	10											45
	LOUISIANA																																											
46	Flint Medical College.—R.																																	2	2									46
47	Tulane University, Medical Department.—R.					1	0											2	0											1	0			55	1									47
	MAINE																																											
48	Medical School of Maine.—R.																																			15	0			3	0			48
	MARYLAND																																											
49	Atlantic Medical College.—P.											0	1	2	0																					3	1							49
50	Baltimore Medical College.—R.											3	0																							1	0	11	5	6	2			50
51	College of Physicians and Surgeons.—R.											2	0																									9	0	2	1			51
52	Johns Hopkins University, Medical Dept.—R.											1	0											1	0	1	0	2	0									10	0	1	0			52
53	Maryland Medical College.—R.																																			3	0	5	6	0	1			53
54	University of Maryland, School of Medicine.—R.							0	1									1	0	2	0			1	0													33	3					54
55	Woman's Medical College of Baltimore.—R.																											1	0									1	1					55
	MASSACHUSETTS																																											
56	Boston University School of Medicine.—H.																																			2	0			10	1			56
57	College of Physicians and Surgeons.—R.																																			1	0			4	6			57
58	Harvard Medical School.—R.																																			1	0			22	1			58
59	Tufts College Medical School.—R.																																			3	0			35	6			59
	MICHIGAN																																											
60	Detroit College of Medicine.—R.																					1	0																			36	0	60
61	Detroit Homeopathic College.—H.																																									5	0	61
62	Univ. of Michigan, Dept. of Med. and Surg.—R.			1	1													1	0																	1	0					58	0	62
63	University of Michigan, Homeo. College.—H.																																									14	0	63
	MINNESOTA																																											
64	University of Minnesota, Coll. of M. and S.—R.																																											64
65	Hamline University, Medical Department.—R.																																											65
	MISSISSIPPI																																											
66	Mississippi Medical College.—R.																	1	0																									66
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							
Margin Number	Minnesota		Mississippi		Missouri		Montana		Nebraska		Nevada		New Hampshire		New Jersey		New Mexico		New York		North Carolina		North Dakota		Ohio		Oklahoma		Oregon		Pennsylvania		Rhode Island		South Carolina		South Dakota		Tennessee		Texas		Utah		Vermont		Virginia		Washington		West Virginia		Wisconsin		Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1			1	0																																																					1	1	0	0.	1	1
2			2	0																																																				5	5	0	0.	3	2
3																													0	1																												7	3	4	57.1	3	3
4																													1	0																												11	4	7	63.6	4	4
5																																																										1	0	1	100.0	1	5
6																																																										3	3	0	0.	2	6
7											1	0																																					1	0								5	4	1	20.0	3	7
8																																																	2	0								21	20	1	4.8	2	8
9							1	0																																																		6	3	3	50.0	2	9
10																																																										3	3	0	0.	1	10
11											1	0																																														6	6	0	0.	2	11
12																																																										16	14	2	12.5	2	12
13																			1	0																																			1	0	17	16	1	5.9	4	13
14																																																										6	6	0	0.	2	14
15																																	1	0																								9	8	1	11.1	4	15
16																																	1	0									1	0														17	16	1	5.9	4	16
17																															1	0																			3	0						8	7	1	12.5	5	17
18																																			1	0					1	0					6	0										16	13	3	18.7	7	18
19																					2	0																			2	0																40	36	4	10.0	4	19
20																					5	0																																				62	56	6	9.7	3	20
21																																																										....	....	....	.....	..	21
22																																																										....	....	....	.....	..	22
23																																			2	0																						23	21	2	8.7	2	23
24																																																										6	6	0	0.	1	24
25																															2	0													1	0												42	31	11	26.2	6	25
26			1	0					0	1																					2	0					2	0			1	0									1	0						97	89	8	8.2	10	26
27																																																										6	3	3	50.0	1	27
28	0	1																									1	0	1	0							1	0											0	2			1	1				114	104	10	8.8	13	28
29																																																					1	0				21	16	5	23.8	6	29
30																																																										7	7	0	0.	2	30
31																																																										22	20	2	9.1	2	31
32																																																										16	13	3	18.7	1	32
33																																																										9	6	3	33.3	1	33
34	6	1							1	0													2	0			2	0	1	0							1	0					7	0					1	0			3	1	1	0	160	155	5	3.1	18	34
35																																																										20	14	6	30.0	1	35
36					2	0																			1	0					1	0					1	0											1	0							74	74	0	0.	9	36
37																									3	0															1	0															59	59	0	0.	3	37
38							1	0																																																		21	19	2	9.5	3	38
39																																																										51	50	1	2.0	4	39
40																													1	0																												4	4	0	0.	2	40
41																											1	0																														19	18	1	5.3	2	41
42					6	0																					1	0																														14	14	0	0.	4	42
43									1	0																																																1	1	0	0.	1	43
44																																																										1	1	0	0.	1	44
45			2	0	5	0															1	0	1	0			1	1	1	0	5	1							8	0	4	0					0	2			15	2					168	149	19	11.3	18	45
46			0	2																							1	0																														7	3	4	57.1	3	46
47			6	0	1	0																			1	0	1	1													14	1					1	0									86	83	3	3.5	10	47
48													1	0																																											19	19	0	0.	3	48
49																															9	0	0	1																							17	14	3	17.7	5	49
50																															9	0	0	1							2	0					3	1			3	0					52	42	10	19.2	11	50
51															[illegible]	[illegible]					1	0									2	0	1	1													1	0			9	0					32	30	2	6.2	10	51
52															1	1			3	0	1	0									3	0									1	0					1	0									27	26	1	3.7	12	52
53																															8	0															3	6			6	1					39	25	14	35.9	6	53
54																															5	1	2	0	4	1					1	0					4	2			3	0					76	68	8	10.5	13	54
55																					1	0																																			4	3	1	25.0	3	55
56	1	0																																																							15	14	1	6.7	4	56
57																																																										12	6	6	50.0	3	57
58	1																																																								27	26	1	3.7	4	58
59																																																										46	40	6	13.0	3	59
60																															1	0																										38	38	0	0.	3	60
61																																																										5	5	0	0.	1	61
62					2																																																					79	78	1	1.3	12	62
63																																											1	0														17	17	0	0.	3	63
64	38	3																					2	0													2	0															1	0			46	43	3	6.5	4	64
65	9	5																																																			1	0			15	10	5	33.3	2	65
66			5	9																																					1	0																	16	7	9	56.2	3	66
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE B.—GRADUATES OF 1909 EXAMINED

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Indiana		13 Illinois		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	MISSOURI																																											
67	American Medical College.—E.																																											67
68	Barnes Medical College.—R.					1	0	1	0													1	0	25	4					2	0													68
69	Ensworth Medical College.—R.					1	0																							8	6													69
70	Kansas City Hahnemann Medical College.—H.					1	0															0	1							10	1													70
71	St. Louis University, School of Medicine.—R.																							28	0					1	0													71
72	St. Louis Coll. of Physicians and Surgeons.—R.																							29	12	1	0	2	2															72
73	University of Missouri, Medical Department.—R.																							1	0			1	0															73
74	University Medical College, Kansas City.—R.							1	0																			1	0	23	0													74
75	Western Eclectic College of Med. and Surg.—E.																													4	1													75
76	Washington University, Medical Department.—R.																							28	1																			76
	NEBRASKA																																											
77	John A. Creighton Medical College.—R.																											1	0															77
78	Lincoln Medical College.—E.																																											78
79	University of Nebraska, College of Medicine.—R.																																											79
	NEW HAMPSHIRE																																											
80	Dartmouth Medical School.—R.																																			1	0			1	0			80
	NEW YORK																																											
81	Albany Medical Collge.—R.													1	0																									1	0			81
82	Columbia University College of P. and S.—R.											2	0							1	0																							82
83	Cornell University Medical College.—R.							1	0			1	0																											1	0			83
84	Eclectic Med. College of City of New York.—E.											1	0																															84
85	Fordham University, School of Medicine.—R.																																											85
86	Long Island College Hospital.—R.											1	0																															86
87	New York Homeo. Med. Coll. and Hosp.—H.																																											87
88	New York Med. Coll. and Hosp. for Women.—H.																																											88
89	Syracuse University, College of Medicine.—R.																																											89
90	University and Bellevue Hospital Med. Coll.—R.											1	0																															90
91	University of Buffalo, Medical Department.—R.																																											91
	NORTH CAROLINA																																											
92	Leonard School of Medicine.—R.																	3	0	3	0																	1	0					92
93	North Carolina Medical College.—R.																	3	0	2	0																							93
94	University of North Carolina, Med. Dept.—R.																																											94
	OHIO																																											
95	Cleveland Coll. of Physicians and Surgeons.—R.																																											95
96	Cleveland Homeopathic Medical College.—H.																																											96
97	Eclectic Medical College.—E.																															1	0											97
98	Medical College of Ohio.—R.																															1	0											98
99	Miami Medical College.—R.																															2	0											99
100	Pulte Medical College.—H.																															2	0											100
101	Starling-Ohio Medical College.—R.																																											101
	Toledo Medical College.—R.																																											102
	Western Reserve University, Medical Dept.—R.																																											103
	OKLAHOMA																																											
	Epworth College of Medicine.—R.																																											104
	OREGON																																											
105	Willamette University, Medical Department.—R.																																											105
106	University of Oregon, Medical Department.—R.																					1	0																					106
	PENNSYLVANIA																																											
107	Hahnemann Medical College and Hospital.—H.							0	1			1	0	1	0	1	0																											107
108	Jefferson Medical College.—R.							1	0			1	1	3	0					2	0							1	0			1	0			1	0	3	0					108
109	Medico-Chirurgical College of Philadelphia.—R.											1	0	1	1																													109
110	Temple University, Medical Department.—R.																																					1	0					110
111	Universit [illegible] ept. of Med.—R.											1	0	3	0											1	0											10	1					111
112	Western [illegible] College.—R.																											1	0															112
113	Woman's [illegible] Pennsylvania.—R.															1	0																											113
	SOUTH CAROLINA																																											
114	Med. College of the State of South Carolina.—R.																	1	1																									114
	TENNESSEE																																											
115	[illegible] Medical College.—R.																			1	1																							115
116	[illegible] and Surgs., Memphis.—R.					0	1																																					116
117	[illegible] llege.—R.																																											117
118	Memphis Hospital Medical College.—R.					1	1																											19	6									118
119	Meharry Medical College.—R.					4	3													8	3			2	2					1	0	0	1	1	5									119
120	Tennessee Medical College.—R.																																											120
121	University of Nashville, Medical Dept.—R.			1	0	1	0																	4	0							2	0	4	0									121
122	University of Tennessee, Dept. of Medicine.—R.					4	0																											4	0									122
123	University of West Tennessee, Med. Dept.—R.					0	1											0	1	0	1																							123
124	Vanderbilt University, Medical Department.—R.							0	1											1	0			0	1							2	0	1	0									124
	TEXAS																																											
125	Baylor University, College of Medicine.—R.																																											125
126	Fort Worth University, Medical Dept.—R.																																											126
127	Southwestern University Medical College.—R.																																											127
128	University of Texas, Dept. of Medicine.—R.																																											128
	VERMONT																																											
129	University of Vermont, College of Medicine.—R.											2	0																											4	0			129
	VIRGINIA																																											
130	Medical College of Virginia.—R.																																											130
131	University of Virginia, Dept. of Medicine.—R.					1	0																																					131
132	University College of Medicine.—R.																			1	0																	0	1					132
	WISCONSIN																																											
133	Marquette University, Medical Department.—R.																											1	0															133
134	Wisconsin College of Physicians and Surgs.—R.																											1	0															134
135	Canadian Colleges											1	0									1	0	2	0													1	0	1	2			135
136	Foreign Colleges							1	0									1	0																									136
137	Miscellaneous Med.									4	1							1	1					1	0	4	0	3	1									1	0					137
	Totals by States	....		5		34		71		26		30		12		19		33		130		9		646		80		93		91		106		105		33		109		114		123		
	Totals—Examined—Passed	....		4		21		59		23		25		11		15		29		114		6		582		80		86		80		95		89		32		92		93		123		
	Totals—Examined—Failed	....		1		13		12		3		5		1		4		4		16		3		64		0		7		11		11		16		1		17		21		0		
	Percentage of Failures	....		20.0		38.2		16.9		11.5		16.7		8.3		21.1		11.8		12.3		33.3		9.9		0.		7.5		12.1		10.4		15.2		3.0		15.6		18.4		0.		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	Minnesota		Mississippi		Missouri		Montana		Nebraska		Nevada		New Hampshire		New Jersey		New Mexico		New York		North Carolina		North Dakota		Ohio		Oklahoma		Oregon		Pennsylvania		Rhode Island		South Carolina		South Dakota		Tennessee		Texas		Utah		Vermont		Virginia		Washington		West Virginia		Wisconsin		Wyoming							
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
67					3	0																																																			3	3	0	0.	1	67
68	0	1			30	12			1	1																															1	0															80	62	18	22.5	9	68
69					7	2			6	1																	1	0																													32	23	9	28.1	5	69
70					1	2	0	1																																																	17	12	5	29.4	5	70
71					34	0	0	1																			1	1																									1	0			67	65	2	3.0	6	71
72					15	8																					1	1			1	0									1	1	1	0													75	51	24	32.0	8	72
73					3	0			1	0																																															6	6	0	0.	4	73
74					23	9																																											1	0							58	49	9	15.5	5	74
75																																																									5	4	1	20.0	1	75
76					41	2																															0	1	1	0																	74	70	4	5.4	4	76
77									24	0																																							2	0			1	0	1	0	29	29	0	0.	5	77
78									8	0																																															8	8	0	0.	1	78
79									9	0																																															9	9	0	0.	1	79
80													3	0					1	0																																					6	6	0	0.	4	80
81																			[illegible]	2							1	0																													28	26	2	7.1	4	81
82																				1	1	0																			1	0											1	0			46	45	1	2.2	8	82
83																				0													1	0																							46	46	0	0.	6	83
84																			7	1																																					9	8	1	11.1	2	84
85																			10	0																																					10	10	0	0.	1	85
86																			41	5																																					47	42	5	10.6	2	86
87																			10	1											1	0																									12	11	1	8.3	2	87
88																			4	0																																					4	4	0	0.	1	88
89																			29	1																																					30	29	1	3.2	1	89
90																			52	0																																					53	53	0	0.	2	90
91																			19	0											2	0																									21	21	0	0.	2	91
92			0	1																	9	3					0	1			2	1			0	1											4	0			1	0					30	23	7	23.3	10	92
93																					12	0													2	0					0	1															20	19	1	5.0	5	93
94																					12	1																																			13	12	1	7.7	1	94
95																									16	0																															16	16	0	0.	1	95
96																									7	0					1	0																									8	8	0	0.	2	96
97																									4	1					3	0																			3	1					13	11	2	15.4	4	97
98																									28	0																															30	30	0	0.	3	98
99																									14	4																	1	0													20	16	4	20.0	2	99
100																									4	0																															6	6	0	0.	2	100
101																									47	3																									1	0					51	48	3	5.9	2	101
102																									5	1																															6	5	1	16.7	1	102
103																			1	0					24	0					3	0																									28	28	0	0.	3	103
104																											2	0																													2	2	0	0.	1	104
105							1	0																					4	3																			1	0							9	6	3	33.3	3	105
106																													10	2																			1	0							14	12	2	14.3	3	106
107	1	0													3	0			1	2					3	0					39	0																									53	50	3	5.7	9	107
108	4	3	1	0			2	0	1	0					8	0					8	0	2	0	1	0	1	0			69																										123	117	6	4.9	23	108
109															3	0			1	0					2	0					64																										77	75	2	2.6	8	109
110																					4	0									18	0																									23	23	0	0.	3	110
111															7	0			3	0					2	0					69	0															1	0	2	0			1	0			101	100	1	1.0	11	111
112																															49	3																			3	0					56	53	3	5.4	3	112
113															1	0															13	0																									15	15	0	0.	3	113
114																																			24	10																					36	25	11	30.6	2	114
115			1	0																																			11	0											1	2					17	14	3	17.7	4	115
116			0	1																	0	1																	4	0	1	0															7	5	2	28.6	4	116
117			0	1																																			5	0																	7	5	2	28.6	3	117
118			18	9	1	1																							0	1									25	0	4	1					0	2									89	68	21	23.6	8	118
119			0	7	3	2																					1	0											[illegible]	0	3	1															69	43	26	37.7	12	119
120																																								0											1	0					14	14	0	0.	2	120
121																																								0	2	1					1	0			1	0					47	42	5	10.6	13	121
122																																							6	0	3	0															21	19	2	9.5	6	122
123																																							3	0																	6	3	3	50.0	4	123
124			3	0	1	0																					1	0							1	0			14	0	7	1															34	31	3	8.8	11	124
125																																									13	0															13	13	0	0.	1	125
126																																										0															12	12	0	0.	1	126
127																																										1															7	6	1	14.3	1	127
128																																										0															34	34	0	0.	2	128
129													0	1	1	0															1	0													15	0											24	23	1	4.2	6	129
130																					3	0																									29	1			3	0					36	35	1	2.8	3	130
131																											1	0																			7	1			2	0					12	11	1	8.3	4	131
132																					12	0																									32	1			1	0					48	46	2	4.2	5	132
133																							1	0																									1	0			10	6			19	13	6	31.6	4	133
134																							2	0																													12	1			16	15	1	6.3	3	134
135	0	1					1	1					1	0	2	0			3	0					1	0																															20	15	5	25.0	13	135
136																																											0	1													3	2	1	33.3	3	136
137																																											0	1			1	2	0	1					1	0	41	30	11	26.9	15	137
	76		74		221		13		67		2		8		35		....		302		89		11		178		29		26		396		12		52		15		132		124		15		16		113		21		68		43		4		4011	....	....	......	..	
	61		41		180		10		64		2		7		34		....		288		83		11		169		22		20		388		8		37		13		132		116		13		16		95		17		62		34		4		....	3586	....	......	..	
	15		33		41		3		3		0		1		1		....		14		6		0		9		7		6		8		4		15		2		0		8		2		0		18		4		6		9		0		....	....	425	......	..	
	19.7		44.6		18.6		23.1		4.5		0.		12.5		2.9		....		4.6		6.7		0.		5.1		24.1		23.1		2.0		33.3		28.9		13.3		0.		6.5		13.3		0.		15.9		19.0		8.8		21.0		0.		....	....	....	10.6	..	
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE C.—GRADUATES OF 1905 TO 1909

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																											
1	Birmingham Medical College.—R.																																											1
2	University of Alabama, Medical Department.—R.																	4	0	2	0																							2
	ARKANSAS																																											
3	College of Physicians and Surgeons.—R.					1	2																											2	1									3
4	University of Arkansas, Medical Dept.—R.					3	5																	0	1									3	2									4
	CALIFORNIA																																											
5	California Eclectic Medical College.—E.							1	1																																			5
6	College of P. and S., Los Angeles.—R.			1	0			4	2																																			6
7	College of P. and S., San Francisco.—R.							13	6																																			7
8	Cooper Medical College.—R.							24	2																																			8
9	Hahnemann Medical College of Pacific.—H.							7	5																																			9
10	Oakland College of Medicine and Surgery.—R.							3	0																																			10
11	University of California, Medical Dept.—R.							9	0																																			11
12	University of Southern California.†—R.							25	6																																	1	0	12
	COLORADO																																											
13	Denver and Gross College of Medicine.—R.							2	0	18	1															1	0																	13
14	University of Colorado, Medical Dept.—R.							1	0	5	0											3	0																					14
	CONNECTICUT																																											
15	Yale Medical School.—R.							1	0			8	1											1	0															3	0			15
	DISTRICT OF COLUMBIA																																											
16	George Washington Univ., Dept. of Med.—R.															20	9	1	0	1	0			2	0			2	0	1	0							4	1					16
17	Georgetown University, School of Medicine.—R.			1	0							2	1			2	1																			1	0			3	0			17
18	Howard University, Medical Department.—R.					2	0									8	6							1	0					1	0							6	1	3	3			18
	GEORGIA																																											
19	Atlanta College of Physicians and Surgeons.—R.																	3	1	30	4																							19
20	Atlanta School of Medicine.—R.																	12	1	43	5																							20
21	Georgia College of Eclectic M. and S.—E.																																											21
22	Hospital Medical College, Atlanta.—E.																																											22
23	Medical College of Georgia.—R.					0	3											2	0	19	3													0	1					0	1			23
	ILLINOIS																																											
24	American Medical Missionary College.—R.																																									7	0	24
25	Bennett Medical College.—R.			1	0	1	0			0	1											0	1	29	9					0	1	1	0											25
26	Chicago College of Medicine and Surgery.—R.																	2	0			1	0	81	7	1	0	0	2															26
27	College of Medicine and Surgery.—Ph.M.																							4	5																			27
28	College of Physicians and Surgeons.—R.							3	1							1	0			1	0	1	0	91	6	1	0	4	0	2	1	1	0									1	0	28
29	Hahnemann Medical College and Hospital.—H.					1	0					0	2									0	1	16	5			3	0	2	0									2	0	1	0	29
30	Hering Medical College.—H.																							6	0	1	0																	30
31	Illinois Medical College.—R.					1	0																	22	7	2	0																	31
32	Jenner Medical College.—R.																							17	10	0	1																	32
33	National Medical University.—P.	0	1																					8	6	1	0																	33
34	Northwestern University Medical School.—R.							4	0													1	1	121	2	3	0	5	0	1	0	1	0									2	0	34
35	Reliance Medical College.—R.																							14	6																			35
36	Rush Medical College.—R.							5	0	1	0											2	0	66	0			2	0													1	0	36
	INDIANA																																											
37	Indiana University, School of Medicine.—R.																									55	0			1	0													37
	IOWA																																											
38	Drake University, College of Medicine.—R.																							0	1			18	2															38
39	State University of Iowa, College of Med.—R.																					3	0	1	0			43	2															39
40	State University of Iowa, Homeo. Dept.—H.			1	0																							3	0															40
	KANSAS																																											
41	Kansas Medical College.—R.																													20	1													41
42	University of Kansas, School of Medicine.—R.							1	0													0	1							9	0													42
	KENTUCKY																																											
43	Louisville National Medical College.—R.																																											43
44	Southwestern Homeopathic Medical College.—H.																															1	0											44
45	University of Louisville, Medical Dept.—R.			1	0	3	0	1	0	0	1							2	0	1	0			8	3	15	1			4	2	90	14	2	1							3	1	45
	LOUISIANA																																											
46	Flint Medical College.—R.																																	2	2									46
47	Tulane University, Medical Department.—R.					2	0	1	0									3	0											1	0			55	1									47
	MAINE																																											
48	Medical School of Maine.—R.																																			18	1			8	0			48
	MARYLAND																																											
49	Atlantic Medical College.—P.											0	1	2	0	1	0																			3	1							49
50	Baltimore Medical College.—R.							1	1	1	1	3	1	1	0	1	1			2	0															2	2	13	7	16	14			50
51	College of Physicians and Surgeons.—R.											2	0			0	1	1	0	1	0	1	0															13	0	4	1			51
52	Johns Hopkins University, Medical Dept.—R.							2	0	2	0	1	0			1	0			1	0			3	0	2	0	2	0									15	0	1	0			52
53	Maryland Medical College.—R.									0	1	1	1	0	1	0	1			1	0			1	0											5	0	8	11	0	2			53
54	University of Maryland, School of Medicine.—R.							0	1					2	0	1	0	1	0	3	0					2	0											40	4					54
55	Woman's Medical College of Baltimore.—R.																											1	0									2	3					55
	MASSACHUSETTS																																											
56	Boston University School of Medicine.—H.											0	1																							2	0			14	1			56
57	College of Physicians and Surgeons.—R.																			1	0															4	2			4	11			57
58	Harvard Medical School.—R.							2	0																											1	0			38	1			58
59	Tufts College Medical School.—R.							1	1																											6	0			53	8			59
	MICHIGAN																																											
60	Detroit College of Medicine.—R.																					3	0																			36	0	60
61	Detroit Homeopathic College.—H.																																									5	0	61
62	Univ. of Michigan, Dept. of Med. and Surg.—R.	1	0	1	1													1	0							1	0									1	0					62	0	62
63	University of Michigan, Homeo. College.—H.							1	1																																	15	1	63
	MINNESOTA																																											
64	University of Minnesota, Coll. of M. and S.—R.							1	1													1	0																	0	1			64
65	Hamline University, Medical Department.—R.																																											65
	MISSISSIPPI																																											
66	Mississippi Medical College.—R.																	1	0																									66
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.
* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma	
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
1			1	0																							2	0
2			3	0																								
3																											0	1
4																											2	0
5																												
6	1	0									1	0																
7											2	0																
8																												
9							1	0																				
10																												
11											1	0			0	1			0	1								
12									1	0																		
13																			1	0					1	0		
14																												
15																			9	0								
16							1	0			1	0									1	0	1	0				
17																			1	1					1	0		
18					1	1									1	1												
19																					2	0						
20																					5	0						
21			0	1																								
22																												
23																	1	0										
24							1	0											1	0								
25																							1	0				
26			1	0			0	1	0	1																	0	1
27																												
28	0	1	1	0	2	0	3	0											1	0			1	0	1	0	2	1
29																			2	1								
30																												
31							1	0											0	1					0	1		
32																												
33			0	1																								
34	8	2					5	0	1	0													3	0			2	0
35																												
36	1	0	1	0	4	0	2	0															1	0	1	0		
37																									3	0		
38							1	0																				
39																												
40																												
41																											1	0
42					8	4																			1	0	4	0
43									1	0																		
44																												
45	0	1	4	0	5	1	1	0							1	1			2	0	1	0	1	0	1	0	8	3
46			0	2																							1	0
47			7	1	1	0	2	0																	1	0	2	1
48													1	0														
49																												
50													2	[illegible]														
51							2	0																				
52	1	0													[illegible]	1			8	0	2	0						
53													0	2													1	0
54	1	0							2	0									1	0	12	0						
55																					1	0						
56	1	0											1	0													1	0
57															1	0												
58	2	0					1	0					1	0														
59													3	0														
60					0	1																						
61																												
62	1	0			2	0	6	0									1	0			1	0	1	0	2	0		
63					1	0																			2	0		
64	46	3																					2	0				
65	12	9					1	0	1	0													3	1				
66			5	14																								
	22		23		24		25		26		27		28		29		30		31		32		33		34		35	

Margin Number	36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1	1	0					0	1					1	0															6	5	1	16.7	5	1
2											1	0																	10	10	0	0.	4	2
3																													7	3	4	57.1	3	3
4																													16	8	8	50.0	4	4
5																													2	1	1	50.0	1	5
6																													9	7	2	22.2	4	6
7	1	0																			2	1							25	18	7	28.0	4	7
8																					3	0							29	27	2	6.9	2	8
9																													13	8	5	38.4	2	9
10																													3	3	0	0.	1	10
11																					2	0							14	12	2	14.3	5	11
12																													33	27	6	18.2	3	12
13	1	0													2	0					1	0					3	0	31	30	1	3.2	9	13
14															1	0													10	10	0	0.	4	14
15			1	0	2	0																							26	25	1	3.8	7	15
16	2	0	1	0	1	0									1	0	1	0	1	0	3	0	1	0	1	0			57	47	10	17.5	20	16
17			3	0															1	0	1	0	4	0					23	20	3	13.0	11	17
18			0	2			1	1					1	0					6	0			2	0					48	33	15	31.2	13	18
19							1	0					2	0															43	38	5	10.4	5	19
20											2	0																	68	62	6	8.8	4	20
21																													1	0	1	100.0	1	21
22																																		22
23							2	5																					37	24	13	35.1	7	23
24	1	0																											10	10	0	0.	4	24
25			2	0													1	0											48	36	12	25.0	10	25
26			2	0					2	0	1	0	1	0							0	2	1	0					107	93	14	13.1	15	26
27																													9	4	5	55.6	1	27
28	2	2							4	1											1	2			1	1			141	125	16	11.3	22	28
29	1	0							1	0											1	0			2	0			41	32	9	22.0	13	29
30																													7	7	0	0.	2	30
31	0	1	2	1																	1	0							40	29	11	27.5	9	31
32																					0	1							29	17	12	41.4	3	32
33			1	0							1	0																	19	11	8	42.1	6	33
34	3	2	2	0					8	2	1	0			10	1					5	0			4	1	2	0	203	192	11	5.4	21	34
35																													20	14	6	30.0	1	35
36	3	0	1	0					6	1					3	0					4	0							105	104	1	1.0	17	36
37													1	0															60	60	0	0.	4	37
38																													22	19	3	13.6	3	38
39											[illegible]	0									4	0							70	67	3	4.3	8	39
40																													8	8	0	0.	5	40
41	1	1																			0	1							25	22	3	12.0	4	41
42																													28	23	5	17.9	6	42
43																													1	1	0	0.	1	43
44																													1	1	0	0.	1	44
45	1	2	7	2			1	1	1	0	10	0	7	0	1	1			4	4	2	1	27	5					260	215	45	17.3	32	45
46																													7	3	4	57.1	3	46
47	1	0											15	1					2	0									97	93	4	4.1	13	47
48																													28	27	1	3.6	3	48
49			[illegible]	1	0	1																							23	19	4	17.4	6	49
50			[illegible]	0	4	4	0	1					2	0			1	0	5	1	1	1	5	0					124	87	37	29.8	21	50
51			[illegible]	0	2	1													2	0			13	0					58	52	6	10.3	16	51
52			5	0									1	0					2	0	2	0	1	0	3	0			58	57	1	1.7	20	52
53			11	0							1	0					1	0	4	7			8	1					69	42	27	39.1	16	53
54			7	1	2	0	7	1			1	0	3	0					4	2			3	0					101	92	9	8.9	18	54
55			1	0															1	0									9	6	3	33.3	5	55
56			1	0	1	0																							23	21	2	8.7	8	56
57																			[illegible]	1	1	0							25	11	14	56.0	6	57
58																					1	1							59	57	2	3.4	10	58
59																					2	2							83	72	11	13.3	8	59
60			1	0																	0	2							43	40	3	7.0	5	60
61																					0	1							6	5	1	16.7	2	61
62	2	0	4	0											1	0					3	0							92	91	1	1.1	17	62
63															1	0													22	20	2	9.1	5	63
64									8	0											2	1			1	0			67	61	6	8.9	8	64
65																					2	0			2	0			31	21	10	32.3	6	65
66											1	0																	21	7	14	66.7	3	66
	36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE C.—GRADUATES OF 1905 TO 1909 INCLUSIVE

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona'		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	MISSOURI																																											
67	American Medical College.—E.																																											67
68	Barnes Medical College.—R.					2	1	1	0	0	1											2	3	26	9					3	0													68
69	Ensworth Medical College.—R.					1	0			0	1											1	0							12	7													69
70	Kansas City Hahnemann Medical College.—H.					1	0															0	1			1	0			10	1													70
71	St. Louis University, School of Medicine.—R.					1	0															1	2	28	0					1	0													71
72	St. Louis Coll. of Physicians and Surgeons.—R.					0	1	1	0															30	18	1	1	2	2	1	1													72
73	University of Missouri, Medical Department.—R.																							1	0			1	0															73
74	University Medical College, Kansas City.—R.					1	0	1	0	0	1																	1	0	27	1													74
75	Western Eclectic College of Med. and Surg.—E.																													4	1													75
76	Washington University, Medical Department.—R.							1	0															30	1	1	0																	76
	NEBRASKA																																											
77	John A. Creighton Medical College.—R.																					1	0					1	0	2	0													77
78	Lincoln Medical College.—E.									0	1																			0	1													78
79	University of Nebraska, College of Medicine.—R.																																											79
	NEW HAMPSHIRE																																											
80	Dartmouth Medical School.—R.																																			1	0			2	0			80
	NEW YORK																																											
81	Albany Medical Collge.—R.													1	0																									1	0			81
82	Columbia University College of P. and S.—R.							1	0			3	0							1	0			1	0															2	1			82
83	Cornell University Medical College.—R.							2	0			1	0			1	0																							2	0			83
84	Eclectic Med. College of City of New York.—E.											1	0																															84
85	Fordham University, School of Medicine.—R.																																											85
86	Long Island College Hospital.—R.											3	0																											1	0			86
87	New York Homeo. Med. Coll. and Hosp.—H.							1	1			3	0																															87
88	New York Med. Coll. and Hosp. for Women.—H.																																											88
89	Syracuse University, College of Medicine.—R.											1	0			1	0																							1	0			89
90	University and Bellevue Hospital Med. Coll.—R.	1	0									2	0													1	0													1	0			90
91	University of Buffalo, Medical Department.—R.																																											91
	NORTH CAROLINA																																											
92	Leonard School of Medicine.—R.	0	1															5	0	5	2																	1	0	0	1			92
93	North Carolina Medical College.—R.																	4	0	2	1																							93
94	University of North Carolina, Med. Dept.—R.																					1	0																					94
	OHIO																																											
95	Cleveland Coll. of Physicians and Surgeons.—R.																																											95
96	Cleveland Homeopathic Medical College.—H.																																											96
97	Eclectic Medical College.—E.																															1	0									1	0	97
98	Medical College of Ohio.—R.																			1	0											2	0											98
99	Miami Medical College.—R.																															2	0											99
100	Pulte Medical College.—H.																															2	0											100
101	Starling-Ohio Medical College.—R.																																											101
102	Toledo Medical College.—																																											102
103	Western Reserve Universit																																											103
	OKLAHOMA																																											
104	Epworth College of Medicine.—R.																																											104
	OREGON																																											
105	Willamette University, Medical Department.—R.																																											105
106	University of Oregon, Medical Department.—R.							0	1													1	0																					106
	PENNSYLVANIA																																											
107	Hahnemann Medical College and Hospital.—H.							0	1			1	0	2	0	1	0																	1	0					2	1			107
108	Jefferson Medical College.—R.							1	0			1	1	3	0					2	0	1	0	1	0	1	0	1	0			1	0			1	0	4	0					108
109	Medico-Chirurgical College of Philadelphia.—R.											1	0	1	1																							1	0	1	0			109
110	Department.—R.																																					1	0					110
111	Dept. of Med.—R.	1	0					2	0			1	0	5	0			1	0					1	0	1	0											13	1	2	0			111
112	Western Pennsylvania Medical College.—R.											0	1															1	0															112
113	Woman's Medical College of Pennsylvania.—R.							1	0							1	0																							1	0			113
	SOUTH CAROLINA																																											
114	Med. College of the State of South Carolina.—R.			1	0													1	1																									114
	TENNESSEE																																											
115	C[illegible] Medical College.—R.			0	1															1	1																							115
116	[illegible] and Surgs., Memphis.—R.					0	1																											1	0									116
117	[illegible] llege.—R.																			0	2																							117
118	[illegible] edical College.—R.					2	1													1	0													21	10									118
119	[illegible] lege.—R.	0	1			5	11			0	2							1	2	10	6			2	3					2	1	1	2	1	6									119
120	[illegible] ollege.—R.																					0	1																					120
121	University of Nashville, Medical Dept.—R.	0	1	1	0	2	0											1	0					4	0							2	0	8	1									121
122	University of Tennessee, Dept. [illegible]					4	0													1	0											0	1	5	0									122
123	University of West Tennessee, [illegible]					0	2											0	1	0																								123
124	Vanderbilt University, Medical [illegible]					1	0	0	1											1																								124
	TEXAS																																											
125	Baylor University, College of Medicine.-																																											125
126	Fort Worth University, Medical Dept.—																																											126
127	Southwestern University Medical College.—																																											127
128	University of Texas, Dept. of Medicine.—																																											128
	VERMONT																																											
129	University of Vermont, College of Medicine.—R.							1	2			3	0																															129
	VIRGINIA																																											
130	Medical College of Virginia.—																																							1	0			130
131	University of Virginia, Dept. of Medicine.—R.																			1	0																							131
132	University College of Medicine.—R.																																							0	2			132
	WISCONSIN																																											
133	Marquette University, Medical Department.—R.																											1	0															133
134	Wisconsin College of Physicians and Surgs.—R.																											1	0															134
135	Canadian Colleges							4	0	2	0	1	0									2	0	4	0			1	0							1	1	1	0	7	4			135
136	Foreign Colleges							2	1			1	1					1	0					1	1															1	1			136
137	Miscellaneous Medical Colleges	0	2			2	0			5	2							2	2	2	1			2	1	5	0	3	2	4	0	5	1	5	0	1	0	3	3	0	1			137
	Totals by States	9		10		64		167		47		51		19		58		58		161		38		726		99		106		126		131		132		54		158		236		137		
	Totals—Examined—Passed	3		8		37		132		34		40		17		39		50		134		26		624		96		96		108		113		107		47		126		182		135		
	Totals—Examined—Failed	6		2		27		35		13		11		2		19		8		27		12		102		3		10		18		18		25		7		32		54		2		
	Percentage of Failures	66.7		20.0		42.2		21.0		27.7		21.6		10.5		32.8		13.8		16.8		31.6		14.0		3.0		9.4		14.3		13.7		18.9		13.0		20.3		22.8		1.5		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	Minnesota		Mississippi		Missouri		Montana		Nebraska		Nevada		New Hampshire		New Jersey		New Mexico		New York		North Carolina		North Dakota		Ohio		Oklahoma		Oregon		Pennsylvania		Rhode Island		South Carolina		South Dakota		Tennessee		Texas		*Utah*		Vermont		Virginia		Washington		West Virginia		Wisconsin		Wyoming							
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
67					3	0																																			1	0															4	4	0	0.	2	67
68	0	1			31	14			1	1																	1	0	0	1							0	2			1	0							1	0							103	69	34	33.0	14	68
69					7	3			6	1																	1	0																					0	2							42	28	14	33.3	8	69
70					1	2	0	1																			0	1																					1	0							20	14	6	30.0	8	70
71	1	1			40	1	0	1											1	0							3	2	0	1																			2	1			1	0			88	79	9	10.2	12	71
72			0	1	16	14																					1	1	2	1	1	0					0	1			1	3	1	0													101	57	44	43.6	14	72
73					3	0			1	0																																															6	6	0	0.	4	73
74					26	12	1	1			1	0															1	0			1	0																	1	0							76	61	15	19.7	11	74
75																																																									5	4	1	20.0	1	75
76					43	3																															0	1	1	0									1	0							82	77	5	6.1	7	76
77	1	0			1	0	1	0	26	1																	1	0									3	0											6	0			1	0	1	0	46	45	1	2.2	12	7,
78					0	1			8	0																																															11	8	3	27.3	4	78
79									9	0																																							1	0							10	10	0	0.	2	79
80													5	1					1	0													1	0																							11	10	1	9.1	5	80
81																				3							1	0																													37	34	3	8.1	4	81
82																				2	1	0									2	0			1	0			1	0	1	0							1	0			1	0			103	99	4	3.9	18	82
83																				0													2	0																							66	66	0	0.	7	83
84																			10	1																																					12	11	1	8.3	2	84
85																			10	0																																					10	10	0	0.	1	85
86																			82	9																									1	0											96	87	9	9.4	4	86
87															1	0			11	1											2	0																									20	18	2	10.0	5	87
88																			4	0																																					4	4	0	0.	1	88
89																			33	1							1	0			1	0																									39	38	1	2.6	6	89
90													1	0	1	0			77	1																									1	0											86	85	1	1.2	8	90
91																			29	0											2	0																									31	31	0	0.	2	91
92			0	1																	10	3					0	1			2	1			0	4											6	2			2	0					47	31	16	34.0	12	92
93																					14	0					1	0							2	0					0	1															25	23	2	8.0	6	93
94																					12	1							0	1									2	0																	17	15	2	11.8	4	94
95																			1	0					16	0					1	0							1	0																	19	19	0	0.	4	95
96																									7	0	1	0			1	0																	1	0							10	10	0	0.	4	96
97																									4	1					3	0																			3	1					14	12	2	14.3	5	97
98																									28																																32	32	0	0.	4	98
99																									14																																22	18	4	18.2	3	99
100																									4																																6	6	0	0.	2	100
101																									47																										1	0					53	49	4	7.5	4	101
102																									5	1																															6	5	1	16.7	1	102
103																			2	0					25	0					3	0																									30	30	0	0.	3	103
104																											3	0																													3	3	0	0.	1	104
105							1	0			1	0																	11	7																			6	0							26	19	7	26.9	4	105
106																													16	6																			3	0							27	20	7	25.9	4	106
107	1	0	0	1											6	1			2	3					3	0	1	0			39	2					0	1													1	0					70	60	10	14.3	15	107
108	4	3	1	0	1	0	2	1	2	0					14	0			9	1	8	0	2	0	5	0	1	0			80	1	1	0	1	0					1	0	4	0	1	0	1	0	5	1	3	0	1	0	1	0	173	165	8	4.6	33	108
109															6	0			2	0					2	0			1	0	68	1															1	0			3	0					89	87	2	2.2	11	109
110																																1																			1	0					22	21	1	4.5	3	110
111																																0					1	0	1	0							2	0	3	0			1	0			138	137	1	0.7	22	111
112																			1	0											57	6																			8	0					74	67	7	9.5	5	112
113									1	0					1	0			2	1									1	0	15	0															1	0									25	24	1	4.0	9	113
114																																			24	13																					40	26	14	35.0	3	114
115			1	0																																			19	0	1	0					1	3			1	2					33	24	9	27.3	8	115
116			1																																				5	0	1	0															11	8	3	27.3	5	116
117			0																																				6	0																	15	8	7	46.7	5	117
118			19	1																	0	1			0	1	3	1											28	0	5	1					0	2									108	78	30	27.8	10	118
119			1	15	4	0															1	0							0	1					2	3			28	0	5	3															129	65	64	49.5	17	119
120																					0	2																	17	0											1	1					22	19	3	13.6	5	120
121			3	4	0	1											1	0			2	1					3	1							2	1			26	0	3	1					1	0			1	0					70	58	12	17.1	17	121
122			2	2					1	0																													9	0	3	0															31	27	4	12.9	9	122
123																											1	0											6	0																	12	7	5	41.7	5	123
124			3	1	1	0									1	0											3	0							1	0			14	0	7	1							0	1							41	36	5	12.2	14	124
125																																									13	0															13	13	0	0.	1	125
126																																										0															12	12	0	0.	1	126
127																																										1															9	8	1	11.1	1	127
128																																										0															37	37	0	0.	2	128
129													0	3	1	0													1	0	1	0													19	0					1	0					40	35	5	12.5	9	129
130																											1	0							1	0											31	3			3	0					42	39	3	7.1	5	130
131																																															13	3			3	0	1	0			27	23	4	14.8	9	131
132																					14	0																									34	1			1	0					51	50	4	7.4	6	132
133							1	1											1	0			1	0					1	0																			1	0			14	9			30	20	10	33.3	7	133
134							1	0															3	0																									1	0			13	1			20	19	1	5.0	5	134
135	2	1					4	1					1	0	3	0			15	0			1	0	4	0			1	0	1	0	2	2			1	0							2	1			8	0			2	0			80	70	10	12.5	23	135
136													0	1	2	2			8	9											3	0	0	1									0	1													37	19	18	48.6	11	136
137	2	0	3	1	2	2	0	1	9	2	1	0					0	1			0	2	0	2	1	0	4	3			1	1			0	1	2	5	7	0	6	0	0	1			3	6	2	3	1	0			1	0	130	84	46	35.4	35	137
	108		122		273		48		76		8		23		72		6		565		110		30		197		83		88		476		28		78		61		191		150		30		30		161		112		109		61		8		5891	....	....	.....	..	
	86 22 20.4		60 62 50.8		206 67 24.5		39 9 18.7		70 6 7.9		8 0 0.		15 8 34.8		65 7 9.7		4 2 33.3		524 41 7.2		96 14 12.7		27 3 10.0		186 11 5.6		64 19 22.9		61 27 30.7		455 21 4.4		19 9 32.1		46 32 41.0		46 15 24.6		191 0 0.		138 12 8.0		26 4 13.3		29 1 3.3		126 35 21.7		88 24 21.4		99 10 9.2		49 12 19.7		8 0 0.		....	4985	.... 906	.... 15.4	.. .. ..	
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE D.—GRADUATES OF 1904 AND PREVIOUS

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																									
1	Birmingham Medical College.—R.																																									1
2	University of Alabama, Medical Department.—R.	1	0			1	0																	1	0																	2
	ARKANSAS																																									
3	College of Physicians and Surgeons.—R.																																									3
4	University of Arkansas, Medical Dept.—R.					1	0																																			4
	CALIFORNIA																																									
5	California Eclectic Medical College.—E.																																									5
6	College of P. and S., Los Angeles.—R.																																									6
7	College of P. and S., San Francisco.—R.							2	2																																	7
8	Cooper Medical College.—R.							0	1																																	8
9	Hahnemann Medical College of Pacific.—H.							1	0																																	9
10	Oakland College of Medicine and Surgery.—R.																																									10
11	University of California, Medical Dept.—R.																																									11
12	University of Southern California.†—R.							1	0																																	12
	COLORADO																																									
13	Denver and Gross College of Medicine.—R.							1	0																							1	0											13
14	University of Colorado, Medical Dept.—R.																					0	1																			14
	CONNECTICUT																																									
15	Yale Medical School.—R.							1	0									1	0																							15
	DISTRICT OF COLUMBIA																																									
16	George Washington Univ., Dept. of Med.—R.															1	0																									16
17	Georgetown University, School of Medicine.—R.																																									17
18	Howard University, Medical Department.—R.											0	1			1	1																							2	0			18
	GEORGIA																																									
19	Atlanta College of Physicians and Surgeons.—R.			1	0															1	0																					19
20	Atlanta School of Medicine.—R.																																									20
21	Georgia College of Eclectic M. and S.—E.																																									21
22	Hospital Medical College, Atlanta.—E.																																									22
23	Medical College of Georgia.—R.							1	1																																	23
	ILLINOIS																																									
24	American Medical Missionary College.—R.							1	0																																	24
25	Bennett Medical College.—R.																									1	0			1	0											25
26	Chicago College of Medicine and Surgery.—R.									0	1																															26
27	College of Medicine and Surgery.—Ph.M.																																									27
28	College of Physicians and Surgeons.—R.							1	2									1	0			1	0	2	1	1	0																28
29	Hahnemann Medical College and Hospital.—H.							4	3															0	1																	29
30	*Hering Medical College.—H.*																																									30
31	Illinois Medical College.—R.																																									31
32	Jenner Medical College.—R.																																									32
33	National Medical University.—P.																																									33
34	Northwestern University Medical School.—R.			1	0			3	1																																	34
35	Reliance Medical College.—R.																																									35
36	Rush Medical College.—R.					1	0	1	3																																	36
	INDIANA																																									
37	Indiana University, School of Medicine.—R.																																									37
	IOWA																																									
38	Drake University, College of Medicine.—R.																																									38
39	State University of Iowa, College of Med.—R.					1	0	3	2																																	39
40	State University of Iowa, Homeo. Dept.—H.																																									40
	KANSAS																																									
41	Kansas Medical College.—R.											1	0																					1	0									41
42	University of Kansas, School of Medicine.—R.																																									42
	KENTUCKY																																									
43	Louisville National Medical College.-																															1	0											43
44	Southwestern Homeopathic Medical																									1	0															44
45	University of Louisville, Medical Dept.—R.			1	0	0	1	1	0									0	1					1	1							2	0	1	0									45
	LOUISIANA																																									
46	Flint Medical College.—R.					1	1																																			46
47	Tulane University, Medical Department.—R.					3	0																	1	0									2	0									47
	MAINE																																									
48	Medical School of Maine.—R.																																			1	0							48
	MARYLAND																																									
49	Atlantic Medical College.—P.																																									49
50	Baltimore Medical College.—R.																																					0	1			50
51	[illegible] Surgeons.—R.			2	0													2	0																			1	0					51
52	[illegible] Medical Dept.—R.																																					2	0	1	0			52
53	[illegible]—R.					1	0													1	0													1	1									53
54	[illegible] School of Medici[illegible]							[illegible]	[illegible]	1	0							1	0																							54
55	Woman's Medical College of Baltimore.—																																									55
	MASSACHUSETTS																																									
56	Boston University School of Medicine.—H.	0	1					1	0																											1	0			1	0			56
57	College of Physicians and Surgeons.—R.																																			1	1			1	0			57
58	Harvard Medical School.—R.							5	1			3	0																							1	0							58
59	Tufts College Medical School.—R.											1	0																											2	0			59
	MICHIGAN																																									
60	Detroit College of Medicine.—R.																					1	0																					60
61	Detroit Homeopathic College.—																																									61
62	Univ. of Michigan, Dept. of Med. and Surg.																																					1	0			1	0	62
63	University of Michigan, Homeo. College.—H.																													1	0											1	0	63
	MINNESOTA																																									
64	University of [illegible] S[illegible]																					1	0																					64
65	Hamline Unive[illegible]																																									65
	MISSISSIPPI																																									
66	Mississippi Medical College.—R.																																									66
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

Margin Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1																																																														1
2			2	0													1	0																																							6	6	0	0.	5	2
3																																																													3
4																										1	2														3	0																7	5	2	28.6	3	4
5																																																	1	0								1	1	0	0.	1	5
6																																																													6
7																													1	0											1	0																6	4	2	33.3	3	7
8																																																										1	0	1	100.0	1	8
9																																																										1	1	0	0.	1	9
10																																																													10
11							1	0																							2	0																		1	0								4	4	0	0.	3	11
12																																																										1	1	0	0.	1	12
13																																																										2	2	0	0.	2	13
14																													1	1																												3	1	2	66.7	[illegible]	14
15																																																										2	2	0	0.	2	15
16							1	0											1	0																	1	0										1	0									5	5	0	0.	5	16
17																			1	0											1	0																										2	2	0	0.	2	17
18																																					0	1																				6	3	3	50.0	4	18
19			0	1																	1	0					1	0	0	1									1	0									1	0								8	6	2	25.0	8	19
20																																																														20
21					1	0											0	1																							3	0																5	4	1	20.0	3	21
22																																																													22
23																																																										2	1	1	50.0	1	23
24							0	1																																																		2	1	1	50.0	2	24
25	0	1					1	1											0	1							0	1																					1	0								8	4	4	50.0	7	25
26																											0	1	0	1																											3	0	3	100.0	3	26
27																																																	0	1								1	0	1	100.0	1	27
28	0	1					1	0	0	2									1	1							2	0	3	2							4	0			1	0												2	0			29	20	9	31.0	14	28
29							1	0											1	0																	0	1											1	0								12	7	5	41.7	6	29
30																									0	1	1	0																													2	1	1	50.0	2	30
31							0	1											0	1							1	0													0	1																4	1	3	75.0	4	31
32																																									1	0																1	1	0	0.	1	32
33																																																													33
34					1	0	1	0	1	0																	2	0	2	0							1	0					1	0					5	1								26	22	4	15.4	13	34
35																																																													35
36	2	0	1	0	1	0	2	0			1	0																	3	2							2	1			2	0								5	2								37	28	9	24.3	15	36
37																																																													37
38					1	0																							0	1																											2	1	1	50.0	2	38
39																							2	0													2	0											0	1								11	8	3	27.3	5	39
40							0	1																																																		1	0	1	100.0	1	40
41																	1	0									1	1																													5	4	1	20.0	4	41
42																													1	0																											1	1	0	0.	1	42
43																																																									1	1	0	0.	1	43
44																																																									1	1	0	0.	1	44
45																																																									28	18	10	35.7	14	45
46																																																									2	1	1	50.0	1	46
47																																																									15	14	1	6.7	9	47
48																																																									1	1	0	0.	1	48
49																															0	1																									1	0	1	100.0	1	49
50																													1	0																			0	1								3	1	2	66.7	3	50
51																			2	0																																					10	10	0	0.	7	51
52																			1																																						7	7	0	0.	5	52
53					0	1																																																			9	6	3	33.3	6	53
54																																															1	0	1	0								10	8	2	20.0	8	54
55			1	0																																																					1	1	0	0.	1	55
56													2	0																																									8	7	1	12.5	7	56
57																																																									7	4	3	42.9	4	57
58																																																									14	13	1	7.2	5	58
59													1																												1	0																7	6	1	14.3	5	59
60																																																													60
61																																																													61
62																																																													62
63																																																									4	3	1	25.0	4	63
64							1	0															2	0					1	0																											7	7	0	0.	5	64
65	0	1					2	0															1	1																																	5	3	2	40.0	3	65
66																																																													66
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE D.—GRADUATES OF 1904 AND PREVIOUS

Margin Number	NAME OF COLLEGE	1 Alabama*		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Margin Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	MISSOURI																																											
67	American Medical College.—E.																					0	1																					67
68	Barnes Medical College.—R.																	1	1			2	1																					68
69	Ensworth Medical College.—R.																													0	1													69
70	Kansas City Hahnemann Medical College.—H.																																											70
71	St. Louis University, School of Medicine.—R.																					1	0																					71
72	St. Louis Coll. of Physicians and Surgeons.—R.									0	1															1	0																	72
73	University of Missouri, Medical Department.—R.																																											73
74	University Medical College, Kansas City.—R.																					1	0	0	1					2	0													74
75	Western Eclectic College of Med. and Surg.—E.																																											75
76	Washington University, Medical Department.—R.							1	1																			1	0															76
	NEBRASKA																																											
77	John A. Creighton Medical College.—R.							1	1																																			77
78	Lincoln Medical College.—E.																	1	0																									78
79	University of Nebraska, College of Medicine.—R.																																											79
	NEW HAMPSHIRE																																											
80	Dartmouth Medical School.—R.							1	0																															1	1			80
	NEW YORK																																											
81	Albany Medical Collge.—R.																																							0	1			81
82	Columbia University College of P. and S.—R.																																							2	0			82
83	Cornell University Medical College.—R.											3	0																															83
84	Eclectic Med. College of City of New York.—E.																																											84
85	Fordham University, School of Medicine.—R.																																											85
86	Long Island College Hospital.—R.																					0	1																	0	1	1	0	86
87	New York Homeo. Med. College and Hosp.—H.											1	0																	1	0									1	0			87
88	New York Med. Coll. and Hosp. for Women.—H.																																											88
89	Syracuse University, College of Medicine.—R.																																											89
90	University and Bellevue Hospital Med. Coll.—R.																	1	0			1	0																					90
91	University of Buffalo, Medical Department.—R.							1	0																																			91
	NORTH CAROLINA																																											
92	Leonard School of Medicine.—R.																																											92
93	North Carolina Medical College.—R.																																											93
94	University of North Carolina, Med. Dept.—R.																																											94
	OHIO																																											
95	Cleveland Coll. of Physicians and Surgeons.—R.																																											95
96	Cleveland Homeopathic Medical College.—H.																																											96
97	Eclectic Medical College.—E.																					1	1	1	0																			97
98	Medical College of Ohio.—R.			1	0													2	0			2	0	1	0							1	0											98
99	Miami Medical College.—R.																															1	0											99
100	Pulte Medical College.—H.																																	1	0									100
101	Starling-Ohio Medical College.—R.							1	0									1	0			1	0					1	0															101
102	Toledo Medical College.—R.																																											102
103	Western Reserve University, Medical Dept.—R.			1	1																																							103
	OKLAHOMA																																											
104	Epworth College of Medicine.—R.																																											104
	OREGON																																											
105	Willamette University, Medical Department.—R.			0	1																																							105
106	University of Oregon, Medical Department.—R.																																											106
	PENNSYLVANIA																																											
107	Hahnemann Medical College and Hospital.—H.							1	0					1	0															1	0													107
108	Jefferson Medical College.—R.			1	1			3	5							1	0	2	0					1	0											1	0			2	0	1	0	108
109	[illegible] of Philadelphia.—R.							1	1													1	0																					109
110	[illegible] Department.—R.																																											110
111	[illegible] Dept. of Me[illegible]							1	0							1	1									1	0													1	0			111
112	Western Pennsylvania Medical College.—[illegible]																																											112
113	Woman's Medical College of Pennsylvania.—R.																																							2	0			113
	SOUTH CAROLINA																																											
114	Med. College of the State of South Carolina.—R.																			1	0			0	1																			114
	TENNESSEE																																											
115	Chattanooga [illegible]																	1	0	2	0	1	1																					115
116	College of Ph[illegible]																																											116
117	Knoxville Medical College.-[illegible]																																											117
118	Memphis Hospital Medical [illegible]																			1	0																							118
119	Meharry Medical College —R.																	1	0	1	1																							119
120	Tennessee Medical Colle[illegible]																																											120
121	University of Nashville, [illegible]																																											121
122	University of Tennessee, [illegible]																	1	0					0	1																			122
123	University of West Tennessee, Med. Dept.—R.																																											123
124	Vanderbilt University, Medical Department.—R.	1	0			2																																						124
	TEXAS																																											
125	Baylor University, College of Medicine.-[illegible]																																											125
126	Fort Worth University, Medical Dept.—R.																																											126
127	Southwestern University Medical College.—R.																																											127
128	University of Texas, Dept. of Medicine.—R.																																											128
	VERMONT																																											
129	University of Vermont, Colleg[illegible] Medicine.—R.							1	0			0	1					0	1																					2	1			129
	VIRGINIA																																											
130	Medical College of Virginia.—[illegible]																																											130
131	University of Virginia, Dept. [illegible]																																											131
132	University College of Medicine.—[illegible]																																											132
	WISCONSIN																																											
133	Marquette University, Medical Department.-[illegible]																																											133
134	Wisconsin College of Physicians and Surgs.-[illegible]																																											134
135	C[illegible]dian Colleges					1	0	1	0			1	0			1	0	1	0			1	0	2	1												1			2	1			135
136	[illegible]							1	1															4	2					1	0					0	1			5	2	1	0	136
137	[illegible] Colleges			2	1	4	0	6	4			1	0	1	0			3	1	2	0	4	3	4	5	1	0	0	3	2	0	2	0	4	2	2	0	0	1	1	2			137
	Totals by States	3		15		25		90		4		14		2		9		24		10		39		36		6		6		15		7		22		11		5		36		5		
	Totals—Examined—Passed	2		11		22		52		2		12		2		7		20		9		28		21		6		2		13		7		14		8		4		26		5		
	Totals—Examined—Failed	1		4		3		38		2		2		0		2		4		1		11		15		0		4		2		0		8		3		1		10		0		
	Percentage of Failures	66.7		73.3		12.0		42.2		50.0		14.3		0.		22.2		16.7		10.0		28.3		41.7		0.		66.7		13.3		0.		36.4		27.3		20.0		27.8		0.		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

* One report not complete. † Now the Los Angeles Medical Department of the University of California.

	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							
Margin Number	Minnesota		Mississippi		Missouri		Montana		Nebraska		Nevada		New Hampshire		New Jersey		New Mexico		North Dakota		North Carolina		New York		Ohio		Oklahoma		Oregon		Pennsylvania		Rhode Island		South Carolina		South Dakota		Tennessee		Texas		Utah		Vermont		Virginia		Washington		West Virginia		Wisconsin		Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Margin Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
67	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	2	66.7	2	67
68	..	..	..	..	..	..	0	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	2	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	7	7	50.0	6	68
69	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	50.0	2	69
70	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	70
71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0	0.	1	71
72	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	0	1	0	1	..	..	..	..	..	..	..	..	..	..	2	0	..	..	..	..	..	..	1	2	..	..	..	..	..	..	11	5	6	54.5	8	72
73	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	50.0	2	73
74	..	..	..	..	..	..	0	1	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	1	1	..	..	..	..	..	..	10	6	4	40.0	5	74
75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	75
76	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	2	40.0	3	76
77	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	5	2	3	60.0	3	77
78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0	0.	1	78
79	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	79
80	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	3	3	50.0	5	80
81	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	50.0	2	81
82	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	..	1	0	..	..	..	..	1	0	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	9	1	10.0	6	82
83	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	5	5	0	0.	3	83
84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0	0.	1	84
85	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	85
86	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	4	2	2	50.0	4	86
87	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	1	25.0	4	87
88	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	88
89																													..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	89
90																													1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	11	9	2	18.1	8	90
91																													1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	6	4	2	33.3	5	91
92	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	92
93	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	93
94	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	94
95	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	95
96																																																														96
97																																																														97
98																																																														98
99	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0	0.	1	99
100	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	0	..	..	..	..	..	..	5	4	1	20.0	3	100
101	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	0	1	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	1	0	9	8	1	11.1	9	101
102	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	0	..	..	..	..	..	..	2	2	0	0.	1	102
103	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	50.0	1	103
104	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	104
105	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	3	0	3	100.0	3	105
106	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	1	1	0	0.	1	106
107	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	5	5	0	0.	5	107
108	..	..	..	..	..	..	2	0	1	0	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	0	1	0	2	1	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29	21	8	27.6	15	108
109	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	0	..	..	0	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	0	..	..	..	..	..	..	9	6	3	33.3	5	109
110	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..																																		110
111	..	..	..	..	1	0	1	0	..	..	..	..	..	..	1	0	..	..	2	0	..	..	..	..	1	0	0	1																																		111
112	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..																																		112
113	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	4	4	0	0.	3	113
114	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	1	0	..	..	0	1	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	6	4	2	33.3	6	114
115	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	4	36.3	6	115
116	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	116
117	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	1	100.0	1	117
118	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	2	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	5	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	18	7	28.0	7	118
119	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	7	3	4	57.1	6	119
120	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	2	..	..	..	..	..	..	6	2	4	66.7	3	120
121	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	0	1	..	..	..	..	..	..	0	1	..	..	..	..	..	..	13	6	7	53.8	10	121
122	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	0	1	1	0	..	..	..	..	..	..	8	6	2	25.0	8	122
123	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	123
124	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	2	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	8	8	0	0.	6	124
125	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	125
126	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0	0.	1	126
127	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	....	.....	..	127
128	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	50.0	1	128
129	..	..	..	..	..	..	1	0	..	..	..	..	1	0	1	0	..	..	1	0	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	1	0	..	..	3	0	..	..	1	0	..	..	..	..	..	..	16	13	3	18.7	12	129
130	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	1	100.0	1	130
131	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	1	1	0	0.	1	131
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133	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	3	2	1	33.3	2	133
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136	1	0	..	..	..	..	2																		1	0	..	..	1	1	2	1	..	..	..	..	..	..	..	..	2	0	..	..	..	..	1	0	3	0	..	..	1	0	..	..	64	38	26	42.2	17	136
137	1	0	3	3	1	0	5																		1	0	7	7	7	2	4	4	..	..	..	..	1	1	4	0	6	1	..	..	1	0	2	0	6	6	..	..	2	0	2	0	156	100	56	36.1	..	137
	7		20		9		43		6		1		7		16		9		73		12		17		8		53		53		25		5		1		20		10		50		2		10		14		85		6		8		4		958	....	....	.....	..	
	4		13		6		29		4		1		5		11		7		42		8		14		6		28		33		19		4		0		14		10		43		2		9		9		60		6		7		4		....	671	....	.....	..	
	3		7		3		14		2		0		2		5		2		31		4		3		2		25		20		6		1		1		6		0		7		0		1		5		25		0		1		0		....	....	287	.....	..	
	42.9		35.0		33.3		32.6		33.3		0.		28.6		31.3		22.2		42.5		33.3		17.7		25.0		47.2		37.7		24.0		20.0		100.0		30.0		0.		14.0		0.		10.0		35.7		29.4		0.		12.5		0.		....	....	....	30.0	..	
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Miscellany

The Problem of the Criminal.—The advanced view of the problem of the criminal, and the one which is being accepted by intelligent men, is that he should be returned to the world after his prison term, not a moral and physical wreck, but if possible, healthier in body and mind. In the new penitentiary being built in New York to take the place of the unhealthful and demoralizing Sing Sing, not all the ideas of the modern penologist will be practiced, but the health of the inmates will be considered and the men released will not have the germs of tuberculosis in their systems, as is now the case with many of them. New York is also establishing a colony for the mentally defective on the pavilion system now in use at modern hospitals for the insane and the tuberculous. Some such plan is sure to be followed in future in the imprisonment and reformation of law-breakers. By it the less hardened would be segregated and would issue forth repentant, and most important of all, with some of their self-respect remaining. When justice learns to punish a man without stripping him of all his self-respect, the problem will be a long way toward solution.—*Newark Evening News.*

Infantile Eczema.—Infantile eczema is found in all classes and conditions of society. In one case the child may be poorly nourished and cachectic while in another the baby may be fat and chubby. In the one case the child may be poorly nourished from the lack of a sufficient amount of wholesome diet, while in the other case there may be a lack of proper relation as regard digestion and assimilation.—C. R. Day, in *Journal of the Oklahoma State Medical Association.*

Appendicitis and Cystitis.—When a chronically inflamed appendix is adherent to the bladder, its removal will bring relief, provided that a colon bacillus cystitis has not already developed. In case of the latter event, operation must be supplemented by measures directed against the vesical infection.—C. W. Bonney, in *Therapeutic Gazette.*

Books Received

DIE UNTERSUCHUNG UND BEURTEILUNG DES WASSERS UND DES ABWASSERS. Ein Leitfaden für die Praxis und zum Gebrauch im Laboratorium. Von Dr. W. Ohlmüller, Verwaltungsdirektor des Virchow-Krankenhauses, und Dr. O. Spitta, Privatdozent der Hygiene an der Universität. Third Edition. Paper. Price, 12 marks. Pp. 422, with illustrations. Berlin: Julius Springer, 1910.

MANUAL OF SURGERY. By Alexis Thomson, F.R.C.S., Professor of Surgery, University [illegible] and Alexander Miles, F.R.C.S., Surgeon, Edinburgh [illegible] Vol. I, General Surgery. Pp. 886, with 339 [illegible] II, Regional Surgery. Pp. 861, with 227 illustrations. Third Edition. Cloth. Price, $7. Pp. 861, with 227 illustrations. New York: Oxford University Press, 1909.

HABIT-FORMING AGENTS: THEIR [illegible] A MENACE TO THE PUBLIC WELFARE. [illegible] sion of Drugs, Bureau of Chemistry. [illegible] ture. Farmers' Bulletin 393. Pap[illegible] Washington: [Superintendent of Do[illegible] Office, 1910.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Twenty-first Session, Held at the Curtis Hotel, Lenox, Mass., on May 27 and 28, 1909. Edited by Linnaeus Edford La Fétra, M.D. Vol. XXI. Reprinted from *Archives of Pediatrics*, 1909-1910. Cloth. Pp. 207, with illustrations. New York: E. B. Treat & Co., 1910.

[illegible] OF GENERAL PRACTICE. [illegible] Patients, St. Thomas' [illegible] M.D., Physician to Out-Patient [illegible] Pp. 364, with 91 [illegible] Press, 1910.

CONSUMPTION: ITS PREVENTION AND HOME TREATMENT. A Guide for the Use of Patients. By H. Hyslop Thomson, M.D., Medical Superintendent Liverpool Sanatorium. Cloth. Price, $1. Pp. 75, with illustrations. New York: Oxford University Press, 1910.

[illegible] A Manual for Students and Practitioners. [illegible] M.D., Fellow of the Royal Society, Edin[illegible] Cloth. Price, $11. Pp. 798, with 275 [illegible]: Oxford University Press, 1910.

THE EXPECTATION OF LIFE OF THE CONSUMPTIVE AFTER SANATORIUM TREATMENT. By N[illegible] D., Medical Superintendent, King Edward VII [illegible] Price, $1.50. Pp. 130. New York: Oxford [illegible] 10.

[illegible] Klinische Studie über Wirkungsweise, Indikationen un[illegible] alquellen. Von Dr. Adolf Ritter, Grossh. [illegible] ize Essay. Paper. Pp. 112. Munich: [illegible] 1908.

TRANSACTIONS OF THE AMERICAN UROLOGICAL ASSOCIATION. Eighth Annual Meeting at Atlantic City, N. J., June 7 and 8, 1909. Edited by Charles G. Cumston, M.D. Cloth. Pp. 477, with illustrations. 1910.

THE REPORT OF THE PEDIATRIC DEPARTMENT OF A MATERNITY POLYCLINIC (DR. HILL'S CLINIC) AND SOME STUDIES IN INFANT MORTALITY. By Herman Schwarz, M.D. Paper. Pp. 28. New York.

SEVENTEENTH ANNUAL REPORT ON THE BIRTHS, MARRIAGES, DIVORCES AND DEATHS IN THE STATE OF MAINE. For the Year Ending Dec. 31, 1908. Cloth. Pp. 189. Waterville: Sentinel Publishing Co., 1909.

THE RELIGIO-MEDICAL MASQUERADE. A Complete Exposure of Christian Science. By Frederick W. Peabody, LL.B., of the Boston Bar. Cloth. Price, $1. Pp. 197. Hancock Press, Boston, 1910.

THE EXCURSIONS OF A BOOK-LOVER. Being Papers on Literary Themes. By Frederic R. Marvin. Cloth. Price, $1.50 net. Pp. 331. Boston: Sherman, French & Co., 1910.

FIFTH ANNUAL REPORT OF THE HOSPITAL OF THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA. For the Year Ending May 31, 1909. Paper. Pp. 59. Philadelphia, 1909.

HYGIENE OF PREGNANCY. By E. H. Harris, M.D., Higginsville, Mo. Paper. Price, 10 cents. Pp. 23.

REPORT OF THE WHITE HOSPITAL, RAVENNA, OHIO. For the Year Ending Dec. 31, 1909. Paper. Pp. 14.

New Patents

Recent patents of interest to physicians:

946529. Making durable solutions of peroxid of hydrogen. Joseph Arndts, Paderborn, Germany.
946633. Hair tonic. Conrad Beyer, Cologne-Rodenkirchen, Germany.
947052. Stoppering device for bottles and the like to prevent fraudulent refilling. Lawrence Blew-Jones, Cornhill, London, England.
946853. Sanitary cuspidor. Harry G. Cathcart, Detroit.
946837. Fountain tonic applicator. Cordelia L. Common, Cleveland, Ohio.
946538. Scalp sprayer. Thomas A. De Vilbiss, Toledo, Ohio.
947153. Optical testing instruments. John F. Forth, Syracuse, N. Y.
946637. Physicians' card index. Charles F. A. Hall, Newburyport, Mass.
946940. Capsule filler. August R. Hesske, Philadelphia.
947078. [illegible]ld. Wilhelm Klapproth, Nieder-[illegible] Germany.
947113. [illegible]ort of the foot. Anthony E. Magoris, Binghamton, N. Y.
946972. Massage apparatus. Coleman J. Manning, Medford, Mass.
946556. Thermocauter. John P. Muller, New Rochelle, N. Y.
946648. [illegible] E. Reichelt, Newark, N. J.
946690. [illegible] stove. Franz Szakall, Palota-[illegible] Budapest, Austria-Hungary.
947609. Work-table for bars, soda-fountain-counters, and the like. Julius J. Betzold, St. Louis.
947551. Truss pad or cushion. Daniel O. Fosgate, Chicago.
947382. Surgical instrument. Justus C. Goosmann, Chicago.
947383. Adjustable bed attachment or rest for invalids. Gertrude M. Greaves, South Yarra, Victoria, Australia.
947412. Abdominal belt or support. Arthur B. Kendrick, East Orange, N. J.
947725. Surgical appliance. William C. Yates, Coalinga, Cal.
947726. Fumigating attachment. Ernest L. B. Zimmer, Minneapolis.
948158. Utilizing nitrous gases. Kristian Birkeland, Christiania, Norway.
948005. Massager. Andrew R. Campbell, Saskatoon, Saskatchewan, Canada.
948233. Body brace. Robert F. MacClemmy, New York.
948234. Body-brace. Robert F. MacClemmy, New York.
948153. Vaporizer for medicines. Arthur G. Whitehorne-Cole, Brighton, England.
948305. Hernial truss. John W. Bunker, New York.
948306. Hernial truss. John W. Bunker, New York.
948443. Pasteurizing apparatus. Robert M. Cauffman and W. Best, Centerville, Mich.
948725. Apparatus for purifying liquids or semiliquids. Nat H. Freeman, Boulder, Colo.
948447. Operating table. Elmer E. Helfrich, Oklahoma, Okla.
948627. Rupture appliance. James C. Hogle and A. Meyer, St. Louis.
948456. Surgical clip applier. Abraham Le Witt, Hartford, Conn.
948930. Preparing medicaments. Alfred Meyer, Mulhausen, Germany.
948835. Ammonia condenser. Bruce Walter, Pittsburg, Pa.
948947. Catalytic and making same. Theodore J. Wrampelmeier, Berkeley, Cal.
949055. Apparatus for removing superphosphates from the decomposition chamber. Knut J. Beskow, Helsingborg, Sweden.
949258. Breast pump. Howard V. Brumley, New York.
949414. Nursing attachment. Hugh B. Cunningham, Arnot, Pa.
949623. Steam face-bath. Sanford [illegible] Dalzelle, Beaumont, Tex.
949728. Supporter. Frederick C. [illegible]
949230. Massage apparatus. Mar[illegible]
949708. Package for chemicals. C[illegible] D. C.
949236. Speculum and spatula. Samuel Kaplan and E. Batault, Geneva, Switzerland.
949539. Vaginal syringe, Oscar Katzenberger, Chicago.
949489. Nozzle. James G. Mastin, Chicago.
949302. Instrument for administering powder and other substances. Ludwig J. F. Nicolai, Dresden, Germany.
949716. Supporter. Arthur Quenzer, New York.
949661. Sterilizing apparatus. Alexandra Richter, Leipzig, Germany.
949550. Massage apparatus. John Sabatino, New York.
949093. Sectional form and truss support. George H. Sherwood, Dayton, Ky.
949134. Local anesthetic. Nathan Sulzberger, New York.

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Original Articles

SUMMARY OF A TEN YEARS' CAMPAIGN AGAINST HOOKWORM DISEASE IN PORTO RICO

BAILEY K. ASHFORD, M.D.
Major, Medical Corps, U. S. Army
AND
PEDRO GUTIERREZ IGARAVIDEZ, M.D.
Director of the Service of Tropical and Transmissible Diseases of Porto Rico
SAN JUAN, PORTO RICO

For years preceding the occupation of Porto Rico by the United States, the anemia problem had been widely discussed here by writers of all professions, and public opinion concerning this deplorable condition is well expressed by a physician and literateur, who, writing in 1886, remarks:[1]

> To malaria, to the debilitating influence of a diet, limited in quantity and poor in quality, and to diseases produced by detestable hygienic defects, we can attribute the majority of the anemia of the Porto Rican peasant.

The author of the treatise above quoted was one of the first to acknowledge the parasitic cause of this anemia shortly after its announcement. But the public simplified its opinion further in succeeding years, laying more and more stress on the factor of insufficient food.

DEATHS UNDER SPANISH AND AMERICAN RULE

The number of deaths for the last five years of Spanish rule in the island was 130,207, with an average death-rate of 28.9 per thousand of population. Three thousand and sixty-two of these deaths were due to smallpox and yellow fever. The number of deaths for the first five years of American government was 159,312, with an average death-rate of 33.48 per thousand. Practically no deaths occurred after June 30, 1899, from smallpox, and none from yellow fever.

Thus in the ten years of American government, to 1908, the last statistics available, smallpox and yellow fever as factors in the death-rate have disappeared.

This enormous increase in the mortality incident to the first five years of American government is due to several causes:

1. In 1898 the war and change of sovereignty occurred and for several years a rather serious economic crisis was felt. Heavily mortgaged coffee plantations lost the high prices coffee commanded before our occupation, due to the exclusive tariff laws of foreign markets and at that very time (in August, 1899) a terrific hurricane wiped out a large portion of the coffee trees. This practically ruined a great part of the coffee planters. As coffee was the chief industry, and peons worked from hand to mouth on these plantations for a mere pittance, when disaster fell on coffee they were reduced to extreme poverty.

2. The endemic of uncinariasis which from time immemorial had been becoming more and more severe in the years preceding the American occupation, became very fatal in the midst of the privation and misery attendant on these disturbances of commerce and the elements. It seems to us that we have in the fact of poor and insufficient food, exposure, etc., a remarkable illustration of how, when resistance to disease is lowered in the life of a whole population, an endemic disease becomes a veritable scourge.

3. More important is another element, as yet but very incompletely discussed in Reports of the Porto Rico Anemia Commission. It is well-known that when eggs of the uncinaria fall on dry ground a tremendous number fail to develop and in those cases that do reach the larval or infective stage the larvæ promptly die in the absence of water which is essential to their life. Now uncinariasis in Porto Rico is a series of multiple infestations in the barefooted population and this infestation, we believe, is practically always accomplished through the healthy skin. There are certain places in the island where dampness is perennial and this depends largely on shade; hence, coffee plantations are apt to be, in spots, always infested. When, however, the sun shines long enough to dry the ground there is an enormous reduction in the infectivity of the soil in general. Ninety per cent. at least of the Porto Rican peasants in 1899 were worm-carriers and were generally so heavily infected as to be worm-sick. Soil pollution is a custom among them; 80 per cent. or more of the total population are guilty of this practice. From 1890 to 1899 about 15 per cent. of the total deaths were ascribed to "anemia." But in 1898 and 1899 the rains deluged the island at the very time that coffee culture was at its height and the ground was always wet. Hence the infectivity of the soil was immensely intensified and laborers in a weakened state, due to poor food, wretched shelter, etc., added dangerous fresh infestations to those already possessed. The result was a huge mortality immediately following the hurricane of 1899.

The total mortality for the period of seven months ending April 30, 1900, was 23,936, which is at the rate of 42 per thousand *per annum*.

In the months of October, November and December, 1899, the months immediately following the hurricane, the death-rate was 57, 58, and 49 per thousand per annum, respectively.[2] In addition to this the same authority commenting on the figures given states:

> The present rate of 42 per thousand would be reduced to 31 if we could eliminate the cases of anemia. . . . The causes to

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[1] Al paludismo, á las causas debilitantes de una alimentacion escasa y de mala calidad, y á las enfermedades producidas por un regimen higienico detestable debemos atribuir principalmente la anemia del campesino puertoriqueño.

[2] The above statistics are to be found in the report of the Superior Board of Health of Porto Rico, pp. 97 and 98.

which this condition is due are of such a nature as to affect the poorest people almost alone. It is well known that a large majority of the island's population is composed of peons, who are scattered over every portion of the country, living in unusually poor hovels, and subsisting on the merest apology for food. This is the class in which this large mortality occurs. It cannot be better shown than by comparing the death rate from anemia in the municipalities of San Juan and Ponce, with that in the municipalities of Utuado and Adjuntas. The former may be considered as inhabited by an urban population, while in the latter by far the greater portion is composed of the peon or poor class. Ponce and San Juan show a death-rate from anemia of 5 and 1 per thousand per annum, respectively, while in Utuado and Adjuntas the death rate is 24 and 32 respectively.

In concluding our remarks for the second five-year period let it be understood that the total mortality is even higher, as the first six months of 1900, with an unusually high death-rate, are not included, due to the change from the calendar to the fiscal year system in furnishing statistical data.

In the last two of the first five years of American government, (fiscal year, 1901-2 and 1902-03) the rains were less continuous and the anemia mortality (and consequently the total mortality) fell to its Spanish normal, minus the smallpox and yellow fever factor. In those first five years, in spite of great publicity given the discovery that the cause of the anemia was "hookworm," in spite of a pamphlet descriptive of the disease, issued as a result of that discovery by the Superior Board of Health of the then military government to all physicians, *practicantes,* and municipal governments in December, 1899, no credence was given the announcement; and this was entirely natural. There was apparently abundant proof that the miserable physical condition of the people was due to the concomitant factors of poor food and poverty, and an united people so explained it.

For this reason, of the 11,885 deaths from "anemia" out of 35,781 deaths from all causes in that year, not one single death was attributed to uncinarial anemia.

In the next five years of American government (1903-1904 to 1907-1908 inclusive) a remarkable change takes place. In 1904 the Porto Rico Anemia Commission began its work and it can be sincerely stated that the fall in mortality can be attributed almost entirely to the campaign of these five years against the disease, which more than all else has given a mortality far above what Porto Rico, a naturally healthy country, should have.

This is not to say that other diseases than uncinariasis do not contribute to a mortality, still unfortunately high. They do, but uncinariasis is still, *par excellence,* the reigning disease of Porto Rico.

In these five years 120,595 deaths occurred, a death rate of 23.33 a thousand a year. A summary of total deaths by five-year periods, taken from official records, is as follows:

TABLE 1

First Five Years.		Second Five Years.		Third Five Years.	
1893	21,616	1898	33,614	1903-04	22,694
1894	24,892	1899	39,918	1904-05	23,050
1895	26,284	1900-01	35,781	1905-06	23,811
1896	25,435	1901-02	24,447	1906-07	27,060
1897	31,980	1902-03	25,552	1907-08	23,980
Totals	130,207		159,312		120,595
Average Death Rate Per 1,000	28.9		33.48		23.33

HISTORY OF THE WORK IN PORTO RICO

Now that at last the continent of the United States has awakened to a realization of the baneful presence of hookworm disease within its own borders and a prominent man of means has made possible the beginning of a campaign against this formidable enemy of industrial and agricultural activity, we, the members of the late Porto Rico Anemia Commission, feel it our duty to deliver to the Rockefeller Commission and the medical fraternity at large, a succinct account of the operations of our commission and its successor, "The Anemia Dispensary Service" in the Island of Porto Rico.

On Nov. 24, 1899, Dr. Bailey K. Ashford, of the U. S. Army, found the extremely prevalent and fatal anemia of the Island of Porto Rico to be due to hookworm disease. He was in charge of a large field hospital, in which were gathered the indigent sick of the cyclone of August of the same year, most of whom were pale, dropsical and debilitated. Not being able to make any appreciable effect on this anemia by abundant and rich food, he was convinced that there existed a common morbific cause, not only for the condition of these patients, but also for that of the great mass of anemics he had noted throughout the island.

He examined the blood of 20 patients at random, found eosinophilia a leading characteristic, and thus was led to examine the feces, where eggs were found which tallied in every particular with those described in Manson's "Tropical Hygiene," then issued to army medical officiers.

Not being a zoologist, Dr. Ashford contented himself with giving a full description of the disease,[3] his blood findings and an exposition of the dangers of the worm to the states from an economic standpoint, leaving to Dr. Charles Wardell Stiles, the recognized American authority on animal parasites, the purely zoologic description of the nematode.

Stiles, in 1902, working with Ashford's specimen of hookworms from Porto Rico, and with others from the United States, found subsequently, announced that zoologically the parasites belonged to a new species, *Uncinaria americana,* although later he changed the name to that which now obtains, *Necator americanus.* The new species, interesting from a zoologic standpoint, although the mode of infection, [illegible] morbid anatomy, treatment and prophy[illegible] caused by the old-world and the new-world worms are, so far as we know, precisely similar, became of tremendous importance when Dr. Stiles demonstrated *for the first time* that hookworm disease was crippling the South just as Dr. Ashford had shown it to be the industrial curse of Porto Rico.

In January, 1902, Dr. Ashford after a careful survey of the literature of this disease in the Surgeon General's Library, returned to Porto Rico and immediately began with Dr. Walter W. King of the U. S. Public Health and Marine-Hospital Service, a complete study of 100 cases in the Tricoche Hospital, in Ponce. These cases were reported elsewhere,[4] giving blood-counts, histories and end-results of treatment up to date of publication. In this article it was shown that over 30 per cent. of the deaths in Porto Rico were charged to "anemia," and an earnest appeal was made to combat the disease that was the scourge of fully 90 per cent. of the agricultural laboring classes *in Porto Rico,* a class representing at least 600,000 souls out of a million population.

A strong editorial in *"American Medicine"* shortly after the appearance of this paper, coupled with the publication, through Col. W. C. Gorgas, then Chief Surgeon, Department of the East, of an official letter to the President of the Superior Board of Health of Porto Rico and an address at the annual meeting of the Medical Association of Porto Rico by Dr. Ashford, pointing out the vital necessity for combating the disease, aroused the interest and concern of the Hon. Regis Henri Post, auditor for Porto Rico, and through him of the Governor, Hon. William H. Hunt. The latter recommended strongly the passage of a bill carrying an appropriation of $5,000.00 for the study and treatment of anemia in Porto Rico, which was favorably acted on by the legislature of Porto Rico in February, 1904, Mr. Post introducing the bill in the Executive Council. Drs. Ashford, King and Gutierrez were appointed members of the commission for this purpose, the War and Treasury departments ceding the services of the first two named. The War Department on request of the Surgeon General furnished a complete field hospital and innumerable scientific instruments and books.

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[3] New York Med. Jour., April 14, 1900.

[4] Am. Med., Sept. 5 and 12, 1903.

This marks the first era in the work against hookworm in Porto Rico and was the first demonstration of its endemic presence on American soil, an endemic now so painfully evident in the South.

SYSTEMATIC WORK BEGUN

We began with only a handful of friends. The press thought it strange that hunger should be "discovered" to be due to a parasite and based its incredulity on serious economic crises, through which the island was passing and chiefly to the loss of foreign coffee markets. The well-informed and moderately well-informed people, whose circumstances protected them against the disease, as they were well shod, reasoned that as they were well *fed* they were perfectly protected against this "hunger-producing parasite," in contradistinction to the afflicted pale ones who were desperately poor and had to live on bananas alone. In short we had a difficult situation to meet. Had it not been for one saving clause we would have failed. That element was the poor man himself. He was so utterly miserable that he could not be more so and as he had faithfully embraced each and all promises to cure him of what he persistently called his "*enfermedad,*" (illness), in spite of the more refined explanation of his better educated compatriots he gingerly accepted our treatment.

The moment we opened our hospital the sick began to arrive. We had told the Governor we might treat 600 cases, but when considerably more than 600 had been treated in Bayamon in less than one month and a cured patient began to deposit his entire family and that of his neighbors at one morning clinic, it became evident that we had to move to some other town where we were not known, or succumb to force of numbers. We moved to Utuado, said to be the most hungry of all of the Porto Rican municipalities, with a population of 40,000. We rapidly reorganized our work to satisfy the demands we knew would come, and in spite of every care and outside assistance we were again overwhelmed with patients. They came from every barrio of the extensive municipality, afoot, horseback, and in hammocks. As soon as some notorious old anemic who had spent his last cent to buy iron pills would return to his barrio from our hospital cured, the whole barrio would swarm about our ears. On July 4, 1904, two members of the commission were ill and the one remaining handled a clinic of over 700 persons, each one of whom had to have a clinical summary of his case made out, a specimen of his feces examined and a prescription written, an unvarying rule in all the work done here so far. In addition, a prophylactic talk was administered and blood counts were made in the afternoon in special cases. Aside from this clinic, we had a field hospital of from 54 to 66 beds filled with patients registering from 8 to 30 per cent. hemoglobin, each one requiring medication of a special nature to meet special complications and intercurrent diseases of so profound an anemia.

Our plan was to leave Utuado for some other town in a month but we never got away. Certainly this work was none the easier for the two American members of the commission who had to contend with a foreign language, and a dialect at that, and with a people whose customs and modes of life were not well known, even by many educated Porto Ricans; nor was it at all less trying to Dr. Gutierrez who was taking his part in an unpopular work at the expense of his private interests. In five months, our $5,000 was spent and 5,049 cases had been treated, and we withdrew to San Juan to write the report of the work.

FIRST REPORT

This report which, together with those of succeeding years, was published by the insular government contained 234 pages of written matter in Spanish and English, with illustrations. It comprised, (1) a fairly complete history of the disease throughout the world, and of the commission's work in the five months' campaign; (2) a discussion of the parasite, its zoologic description and its life history, together with all possible predisposing causes for the profound anemia observed; the symptomatology, the pathogenesis, morbid anatomy and course, prognosis, and lethality, prophylaxis, diagnosis and treatment. An appendix to this report gives the details of 61 special cases, in which weekly blood records of hemoglobin, counts of red and white blood cells and differential counts of leucocytes are tabled. Also a synopsis of all deaths, of which there were but 27, or a total mortality of 0.49 per cent.

This report fully demonstrated the cause of death from "Porto Rican anemia" and finally relegated the matter of insufficient and improper food to the secondary place of a mere predisposing factor. It demonstrated beyond a reasonable doubt that uncinariasis was contracted through contact of the healthy skin with infested earth, the first practical demonstration on a large scale of Loos' beautifully clear laboratory experiments, and, above all, it convinced the people of Porto Rico that they were dying of a curable disease; that their entire laboring class was threatened with at least semi-invalidism, and that it could be successfully combated with a drug which had been hitherto unjustly accused in Europe of being a dangerous and unjustifiable remedy. The manner in which the Porto Rican people received this report does them fine credit, not at all understood or appreciated by outsiders, and sweeps away all the bitterness of five years of apparent indifference for which they were really largely excusable. From that time to the present this work has been loyally supported by larger and larger appropriations each year, made by the Legislature of Porto Rico.

In the year 1905-1906, we decided to have our central dispensary and field hospital, and administer from this unit as many sub-stations as our meager funds would permit. Recognizing that the highlands of Porto Rico were the most needy, Aibonito, a town in the mountains, was chosen, and around it were grouped in little towns the bulk of the sub-stations. Apart from these surrounding towns we placed one large station in Lares, a mountain town of the West, and one in Utuado, in the center of the island.

In four of our ten stations the town offered to bear all expenses if we would administer the work and furnish the medicines. The physicians volunteered their services. This alone will demonstrate the excellent spirit prevailing.

SECOND REPORT

Our second report contained 176 pages and reports 18,865 cases. It demonstrates that:

1. The keynote of the campaign looking toward an effective reduction of the frequency of the disease must depend on the treatment of all persons infected, on personal direct education of the laboring classes by lectures and pamphlets, and on a complete reformation of the public health service in Porto Rico.
2. Ground-itch is the first sign of infestation, and to avoid it shoes should be worn and earth pollution stopped.
3. The coffee districts of Porto Rico are the most intensely infested of all regions in the island.
4. Five doses of thymol given a week apart are sufficient to practically cure nearly every patient and to reduce the power of infectivity of the patient to the soil about nineteen-twentieths.

In addition a full plan for future work is laid out and it is *brought forcibly home to all that from this time on the extermination of Porto Rican anemia, is largely a matter of money.* Not the least of the labors of this year was the counting of all uncinariæ expelled after each dose of thymol in 40 cases and after each dose of betanaphthol in 30 more. This was most tiresome and disgusting, but a fruitful work, as we established the fact that after even one dose 74.54 per cent. of the parasites were expelled.

On receipt of this report, again the Legislature of Porto Rico trebled their appropriation of the year before and the third year's work began.

At this point Drs. Ashford and King returned to their services and Dr. Pedro Gutierrez Igaravidez took the directorship of the work.

PERMANENT COMMISSION ESTABLISHED

In view of the fact that the Porto Rico Anemia Commission of the previous two years had demonstrated beyond a doubt the extent and curability of uncinariasis, the legislature of 1906 passed a law organizing for the first time a permanent commission for the extermination of uncinariasis in Porto Rico.

Governor Winthrop appointed Dr. Gutierrez Igaravidez as president and Drs. I. Gonzales Martinez of Mayaguez and Dr. F. Sein Sein of Lares as members of that commission on June 25.

This commission, after discussion of the problems before them, in accord with the plans of the previous commission, considered it necessary to continue the work by means of dispensaries as in preceding years, thus offering to every man, woman or child suffering with uncinariasis, a microscopic diagnosis, a free specific for his disease and printed matter and verbal explanation of the endemic, which would tend to disseminate the facts among his neighbors and friends and thus popularize the reform undertaken.

The requests for dispensaries from nearly every town in the island showed the desire of the people that the campaign be made to cover, so far as resources permitted, every particle of ground possible; the commission realized the justice of these requests and decided to establish the largest number of stations feasible.

DISPENSARIES OPENED

As the practical problem outweighed every other consideration in the fight against this disease, both from the standpoint of prevention and cure, the commission directed its efforts rather toward this phase of the question than to the scientific work which more time and money might have made also possible. Each month as soon as they could be organized, dispensaries were opened in some towns, until 35 were found working at the end of the fiscal year, 1906 and 1907. In order to better administer the stations and supply them, the island was divided into three districts, one for each commissioner. The central station was established near San Juan and directed the entire work.

Each commissioner and some of the directors of dispensaries were permitted to place in the municipal hospitals at the expense of the service certain seriously ill anemics, who were unable to return to their homes and who apart from this offered opportunities for clinical research and for the study of the effects of new remedies for the expulsion of the worm.

In the 35 dispensaries in operation in the year 1906-1907, 89,233 persons were treated, of whom 43.09 per cent. were cured. The remainder, for reasons before expressed, could be considered as having been relieved of such an overwhelming number of their parasites as to no longer suffer clinically from the disease. In addition, such patients possessed only a small fraction of their power for infestation of the soil. The mortality was but 0.21 per cent. The records kept of these patients was the same as kept in previous years; *a card of identification corresponding to the serial number of the history card kept at the dispensary was given each patient.*

LITERATURE DISTRIBUTED

Printed circulars were widely distributed, in which the nature of the "anemia" of Porto Rico was made plain, and also the manner of contracting it and the means of avoiding it. These circulars reached the planters and interested them in sending patients to be cured at the dispensaries. In addition to this, each patient on receiving his medicines was issued a colored card with printed instructions as to the manner in which they should be taken and the means that should be adopted to avoid reinfection. In conjunction with the above prophylactic measures the commission wished to try out the effects of sanitary inspectors who would visit the country barrios (or townships), and who would speak in the homes of these people of the campaign that was going on, investigating at the same time the general health conditions prevailing in each home and advising those who had not visited the dispensary to immediately take up the treatment of their curable affection. These inspectors left a card of explanation at the houses and noted under the printed headings of another card the information required of him by the commission. But lack of funds only allowed three such inspectors. These methods brought a greater number of sick to the dispensaries, caused latrines to be constructed, where before there had been none, and would have been even more fruitful of good had enough money been available to employ more inspectors.

SCIENTIFIC STUDIES

Although the cure of the greatest number of sick and the instruction in prophylaxis were the principal objects of the work of this and following years, we note in addition some scientific studies worthy of special mention:

1. The discovery of the presence of *Ankylostoma duodenale* by Dr. Gutierrez in the Central Station at Rio Piedras in the person of a native Porto Rican who had never been out of the island, thus proving the coexistence of the old-world and new-world species in Porto Rico.

2. The trial of Phillips' eucalyptol and chloroform treatment for the expulsion of the worm by Gutierrez. This treatment was not as successful in the hands of the commission as it was reported to have been by its author. The patients thus treated suffered greatly from dizziness, lethargy, somnolence and fainting spells. Some grave cases of collapse occurred, and as many of them refused to continue the treatment by this medication, it was abandoned.

3. The study of tissues recovered from autopsies performed by the first anemia commission in cases of fatal uncinariasis. These tissues were sectioned and stained by Dr. Ashford in Washington and studied there by him, Dr. King, and by the late Major James Carroll and Major F. F. Russell, both of the Army Medical Corps.

4. The study of the influence on the urine of uncinariasis and the anthelmintics used for the expulsion of the parasites. These voluminous notes were compiled and reported by the first commission and are found in the reports for 1906 and 1907. Notes on animal experimentation performed by Gutierrez and Ashford at the close of the last year were compiled, and sections from the human intestines were photographed of the worm *in situ* by Dr. William Gray of the Army Medical Museum.

REPORTS FOR 1907 AND 1908

The report of 1906-1907 contained 206 pages and was illustrated.

The next year, 1907-08, the legislature again appropriated a sum for the continuance of the work and the 35 dispensaries founded in the preceding year were continued, although some were moved to other towns, and 7 more dispensaries were added, making 42 in all, The service in this year followed the plan of the last year, and 81,375 persons were treated with 51.54 per cent. cured, and a mortality of 0.12 per cent.

In 1908 the Legislature did not appropriate any funds for the continuance of the work, so that it was necessary to close all stations June 30, 1908. Nevertheless, surplus medicines on hand permitted many former directors of dispensaries to continue treating applicants, which they did without remuneration from the insular government.

A special session of the legislature was convoked by proclamation of the Governor to consider the irrigation project for the island and the anemia problem, and in September, 1908, the legislature made a modification of the law placing the work of the Commission under the Department of Health, Charities and Corrections as a bureau of that department with the name of Anemia Dispensary Service. The director of this service was Dr. Gutierrez who began in October to organize it.

In November, 1908, after a month's work in organization, the old dispensaries were gradually restored and the total number increased to 59. The number treated this year plus those treated in the five preceding months by voluntary service by the former directors of dispensaries reached 54,725, of whom 41.49 per cent. were cured and 0.08 per cent. died. In addition, 9,159 were treated as patients of former years, making a total of 63,884 treated in 1908-09.

The following table gives a succinct statement of the work to date:

TABLE 2.—SUMMARY OF ANEMIA WORK

Years.	Patients Treated.	Age: Under Ten Years.	Between Ten and Thirty.	Over Thirty.	Not Recorded.
1904-5...	5,490	566	3,138	1,764	22
1905-6...	18,865	2,199	11,532	4,922	212
1906-7...	89,233	8,913	51,972	28,232	116
1907-8...	81,375	8,954	52,608	19,152	661
1908-9...	54,725	6,668	34,905	13,152	...
Total....	249,688	27,300	154,155	67,222	1,011
Percentage		10.93	61.74	26.92	0.41

CLINICAL TYPE

Years	Very Light.	Light.	Medium.	Intense.	Very Intense.	Unclassified.
1904...	.....	1,222	1,063	2,258	.....	947
1905-6...	1,378	4,483	8,706	3,501	440	357
1906-7...	7,085	19,503	38,439	19,212	4,162	832
1907-8	3,022	14,968	40,136	19,140	3,465	644
1908-9...	.....	10,720	24,248	16,409	3,344	4
Total....	11,485	50,896	112,592	60,520	11,411	2,784
Percentage	.4.59	20.38	45.10	24.24	4.57	1.12

	Number of Visits.	Number of Deaths.	Amount Spent.	Per Patient.
1904-5..........	22,000	27	$ 4,954.84	
1905-6..........	76,896	67	10,808.77	
1906-7..........	425,131	193	49,116.31	
1907-8..........	472,407	93	56,950.57	
1908-9..........	305,598	46	32,360.91	
Total	1,302,032	426	$154,191.40	.6175

TOTAL NUMBER TREATED

In addition to the 249,688 patients treated up to June 30, 1909, there have been treated, but not yet classified, from that date to Feb. 28, 1910, 22,568 more; hence the sum total to date is 272,256 persons who have received treatment from 1904 to the latter date, by government work alone. It would be impossible to fix the total number who have been treated apart from government work for uncinariasis. This number cannot possibly be less than 30,000. Thus 300,000 is the total number so far treated for uncinariasis in the Island of Porto Rico since March, 1904.

THE WORK OF DR. KING

This is the first time in the history of the Porto Rico Anemia Commission that all its members have not taken an active part in preparing public reports of its labors. Time and distance separate us from the third member, who otherwise would have shared in the preparation of this work. But it is not amiss to note that Dr. Walter W. King was one of its members, planned with us the work it has accomplished and met the difficult situations it has fortunately weathered. Although he does not sign this article with us, his name is intimately associated with every page of its history.

Senile Cataract Often Avoidable.—C. Ziem of Danzig, Germany, presents a number of arguments to sustain his contention that cataract is not the result of encroaching age alone but is due mainly to other factors, most of them avoidable. He includes among these unhygienic, damp dwellings, a damp subsoil as at St. Petersburg and Rotterdam, and dampness from the melting of heavy snows. Chief in importance, however, seem to be chronic purulent nasal affections, and he relates nine cases in which this coincidence was striking, especially as vision improved materially under treatment of the nasal trouble, and particularly when sinusitis was cured. He attributes the improvement to the bettering of the conditions in the circulation in the region and vicinity. His article on the subject is published in the *Archives internat. de Laryngologie, etc.*, 1910, xxix, 397.

A CLINICAL INVESTIGATION ON THE RELATIONSHIP OF TUBERCULOSIS TO CERTAIN DISEASES OF THE EYE*

GEORGE S. DERBY, M.D.
BOSTON

AND

THOMAS H. AYER, M.D.
WESTBORO, MASS.

We wish to present for consideration a summary of the examination of ninety-two cases in which the ocular disease suggested a tuberculous origin. In selecting these patients for investigation our suspicion of tuberculosis rested on the clinical type of the disease process in the eye.

The study was carried out during a period of five months (October, 1908, to February, 1909) in the out-patient clinics of the Carney Hospital and the Massachusetts Charitable Eye and Ear Infirmary, and we are much indebted to the staff of the latter institution for allowing us to make use of their material.

The plan of work was as follows: Having selected our patient, a careful record of the family history, personal history and present illness was made. The cutaneous test was then performed on the upper arm, for which at first we used a 25 per cent. solution of old tuberculin supplied by H. M. Alexander & Co. More recently we have discarded this for the full strength tuberculin as recommended by von Pirquet in his last publications.

In all of the patients a control vaccination was made. The patient was seen after forty-eight hours and, in case of a negative result, watched until the possibility of a reaction was over.

Following the vaccination, our patients were referred to the medical clinic of the Carney or to that of the Massachusetts General Hospital with the request in each instance that special attention should be paid to the question of an active or inactive tuberculosis. We wish to express our obligations to the members of the staffs of those two institutions who aided us in this connection.

In a few instances in which a definite diagnosis was of great importance and no confirmatory signs elsewhere could be obtained, the patient was taken into the hospital and the subcutaneous test applied for the purpose of producing, if possible, a local reaction.

In tabulating our results we have recorded our medical examinations as positive whenever the consultant reported the case as suspicious. As a matter of fact, there are but few cases in our series in which an absolutely definite diagnosis of tuberculosis elsewhere could be made, and those are, first, the ones in which there was a positive local reaction to the subcutaneous injection of tuberculin; and, second, a few cases of tuberculous adenitis or tuberculosis of the larynx and one of lupus of the nose. No bacilli were found in the sputum of any patient, which only serves to emphasize the early stage of the pulmonary process. In these patients the family history was recorded as positive if there was reasonable evidence of a tuberculosis affecting a member of the patient's immediate family.

Our cases may be roughly divided into two groups, in one of which the ocular inflammation was superficial, and one in which the deeper structures of the eye were involved.

GROUP I

The first group is made up of the so-called phlyctenular cases. We have fourteen cases of phlyctenular conjunctivitis with an average age of 14½ years.

In 3 of these (21 per cent.) the family history was positive. Only 1 patient (0.7 per cent.) showed an elevation of temperature. Nine (64 per cent.) gave positive physical signs. In 7 these signs were in the lungs, while 1 had a tuberculous adenitis and 1 a lupus of the nose. The cutaneous reaction was positive in 11 (78.5 per cent.).

The second division of the first group contains the so-called cases of phlyctenular keratitis (keratitis eczematosa, scrofulous keratitis), and we regret to classify them under so unsatisfactory a term; for in but few of them were actual phlyctenules observed. They are rather the cases of recurrent superficial inflammation of the cornea, with or without vascularization, occurring usually in children and young adults of unhealthy appearance. We have 52 such cases, with an average age of 9½ years; the youngest 1 year; the oldest 27. In this group the family history was positive in 13 (25 per cent.). The temperature was elevated in 25 (48 per cent.). There was positive physical findings in 23 (44 per cent.). In 17 of these the lungs were suspicious. Five had a tuberculous adenitis, 1 a tuberculous empyema, 1 a tuberculous larynx, 1 a tuberculous spine. In 48 cases (92.3 per cent.) the cutaneous test was positive.

It may be noted here in this connection that in a series of 43 phlyctenular cases published last year by one of us[1] 88 per cent. of patients reacted to tuberculin, and in the same paper attention was called to 23 similar cases tested subcutaneously by Stock with an exactly similar percentage of positive reactions. Fifty-nine of the 66 cases of this present series gave a positive cutaneous reaction (89 per cent.), a remarkably close approach to the former figures.

GROUP II

Leaving now for the moment the group of superficial inflammations, we have 26 cases in which the deeper ocular structures were involved. These are made up of 6 cases of scleritis, 6 of interstitial keratitis, 4 of uveitis, 7 of sclerokeratitis and 3 of keratoiritis. As a matter of fact all these cases may be placed together, for although they have been classified anatomically according to the location of the chief process, yet usually during the course of the disease neighboring tissues became involved.

Of our 26 patients the youngest was 6 years; the oldest 49; the average age was 26⅓ years. The family history was positive in 5 (19.2 per cent.). The temperture was elevated in 12 (46 per cent.). The physical signs were positive in 18 (69 per cent.). In 15 of these the lungs were reported as "suspicious," while in 3 there was a tuberculous adenitis. The cutaneous reaction was obtained in 24 (92.3 per cent.). It may be of interest to combine the figures of the first group and compare them with those of the second.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

[1] Derby, G. S.: The Increasing Importance of Tuberculosis as a Cause of Ocular Disease. The Newer Methods of Diagnosis and the Treatment, Arch. Ophth., 1908, xxxvii, No. 5.

Group I (Superficial Ocular Inflammations) and Group II (Inflammations Involving Deeper Structures of the Eye)

FAMILY HISTORY

Group I: 66 cases. Positive in 16, or 24.2%.
Group II: 26 cases. Positive in 5, or 19.2%.
Whole Series: 92 cases. Positive in 21, or 22.8%.

TEMPERATURE

Group I: 66 cases. Elevated in 26, or 39.3%.
Group II: 26 cases. Elevated in 12, or 46.1%.
Whole Series: 92 cases. Elevated in 38, or 41.3%.

SUSPICIOUS SIGNS OF TUBERCULOSIS

(Lungs, glands, local reaction to subcutaneous test, etc.)
Group I: 66 cases. Positive signs in 32, or 48.5%.
Group II: 26 cases. Positive signs in 18, or 69 %.
Whole series: 92 cases. Positive signs in 50, or 54.3%.

REACTION TO TUBERCULIN

Group I: 66 cases. Positive in 59, or 89.3%.
Group II: 26 cases. Positive in 24, or 92.3%.
Whole series: 92 cases. Positive in 83, or 90.2%.

In fifty cases out of a possible ninety-two there were signs pointing to a tuberculosis outside the eye, and as pertinent here we quote from the paper previously referred to:

> Since at autopsy tubercular lesions, healed or active, are found in from 40 per cent. to 90 per cent. of subjects, it follows that only in a small percentage of cases, most of them of a severe type, is the diagnosis made during life. There are then many mild cases, some of which are not seen by the medical man, and others in which the signs and symptoms are not clear enough to render the diagnosis possible. Most of these patients get well, and only in the event of autopsy is the disease manifest. In a large percentage of cases where it has been possible to make a definite diagnosis of tuberculosis, the disease has been in an advanced stage and cure has been uncertain. This is especially true of pulmonary tuberculosis, in which the finding of bacilli in the sputum clinches the diagnosis, but means advanced disease. I believe the same conditions exist in regard to ocular tuberculosis. Formerly only the hopeless cases, leading to the destruction of the eye, were recognized, while now we are beginning to recognize the milder types which are curable.
>
> If tubercular disease of the eye is as prevalent as my figures tend to show, it will lie in the power of the ophthalmologist to take a more active part in the fight against tuberculosis than he can at present. We see hundreds of these cases in our clinics each year. My small series shows that many have signs pointing to tuberculosis in their lungs or elsewhere. These are the incipient cases that the tuberculosis expert wishes to reach. Even if the patient shows no general signs of the disease himself, he may be the means of directing attention to the whereabouts of an active focus of tuberculosis in the community.

Our present study tends to confirm these views. Furthermore, if we should search in these cases for signs of the so-called scrofulous diathesis we should find them, as many investigators of phlyctenular disease have shown, in a much larger number of patients, 85 to 90 per cent. As time goes on the identity of scrofula with tuberculosis is becoming more widely accepted. As long ago as 1904 Behring stated:

> Candidates for tuberculosis owe their much-discussed predisposition to an infantile infection with tuberculous virus. The practicing physician will before long become convinced that human pulmonary tuberculosis is no more nor less than the final stage of a tuberculous infection dating from infancy, which infection in childhood manifested itself in the signs of a relatively latent scrofulosis.

We believe that for the good of the community, if not for the individuals themselves, these eye patients should be given a thorough physical examination as a routine procedure. We think it likely that the deep and severe tuberculous infection of the eye are often the final stage of a tuberculous infection acquired in childhood and manifested at that time in the form of a phlyctenular process.

It is important that the significance of these forms of ocular disease should be brought to the attention of the opthalmologist and to the medical profession in general.

TUBERCULIN FOR DIAGNOSIS

In our work the use of the subcutaneous test for diagnosis has been found impracticable except in a small portion of the cases. It is impossible in large clinics to obtain the requisite number of hospital beds and it is very difficult to induce the patient to give up a sufficient amount of time for the test. Then, too, the moral effect of a positive reaction with marked general disturbance is often disastrous and has in our experience caused the patient to refuse subsequent tuberculin treatment. Furthermore, the anticipated local reaction may not be obtained. We believe in confining the subcutaneous test to those cases in which the diagnosis can be made in no other way and in which a diagnosis is essential if an intelligent course of treatment is to be prescribed. We have discarded the conjunctival test as being occasionally productive of disastrous results and as being but little more convenient than the cutaneous. We do not believe that there is as yet sufficient evidence of the superiority of the former test as indicating an active tuberculous focus. There can be no doubt that a negative cutaneous test is of far greater importance than a positive one. A positive reaction can add but little to the diagnosis of the ocular disease while as a result of two negative cutaneous tests tuberculosis may, with reasonable probability, be excluded. We have performed the latter test on nearly 200 patients and have never seen harm result from it.

TREATMENT

Although not included in the title of this paper, it may not be amiss to take up the question of treatment.

We reiterate the belief expressed by one of us previously[1] that these patients as a group are best handled by means of the tuberculosis class. In our work we have seriously felt the need of such organizations, and up to within a few months have had to refer our patients for treatment to the classes of other institutions. Three months ago we assisted in establishing such a class at the Carney Hospital for the treatment of all varieties of tuberculosis and in January a class for ocular tuberculosis alone (of which one of us is in charge) was financed by certain generous private individuals and was started at the Massachusetts Charitable Eye and Ear Infirmary. This we believe to be the first of its kind.

Our machinery there consists of an ophthalmologist, an internist, a social worker and a nurse. Patients are referred from the clinics to the class for the investigation necessary to diagnose, and when this is positive and the patient's case is a suitable one for class treatment he is registered as a member. We have a weekly session, but certain seriously affected patients are seen more often and the patients with milder cases may be instructed to report less frequently. Each patient is given a book in which a minute record of his daily life may be recorded. He is weighed, his temperature taken, and, if indicated, a tuberculin injection is given. This is but a part of the treatment, however, for it is most important to reach these patients in their homes and to exercise a strict control over their manner of living. Our treatment differs but little from that of the general tuberculosis class, except that our cases are usually a milder type of disease than the average one seen in the general class. We insist on rest during an active inflammation, and especially if the temperature is elevated during some period of the day, even if the rise be slight. The patients are taught cleanliness and how to get the maximum amount of fresh air. They have the usual antituberculosis diet and forced feeding. They are visited in their homes by our social worker as often as is necessary, and in this way we keep in close touch with them and do not have to depend on their own statements.

The severity and duration of the treatment needed varies markedly with the individual case. Most of the patients in phlyctenular cases soon recover and remain well if they contiue to live in good hygienic surroundings. We have them report every month or two. The deeper processes have been much stubborner and in our hands usually require treatment for many months. As has been observed by many, these cases are all especially liable to recurrences even when the patient's condition becomes robust.

We have a certain amount of money at our disposal to help worthy patients who can not follow out directions on account of lack of means. Those who have not homes where proper treatment may be carried out are referred to various institutions which have facilities for handling tuberculosis. Occasionally we meet a case in which class treatment is not successful. These are referred to the sanatoria; just as in all medical cases each patient must be treated as an individual and the treatment modified to suit his wants.

The paper referred to above[1] stated that the writer (G. S. D.) had been convinced of the value of tuberculin. As the result of further observation we wish to modify this statement. In the classes referred to tuberculin is used in all severer inflammations. As a rule the phlyctenular case does not need it. We believe that, as a rule, our patients do better when tuberculin is used. We employ now a bouillon filtrate obtained from Saranac and begin ordinarily with an initial dose of 0.0001 mg. It has seemed to us that our patients did better and suffered less harm on small and increasing doses rather than when given larger doses for the purpose of stirring up a slight local reaction. We have, however, seen in certain instances a marked improvement follow the diagnostic injection of old tuberculin, and in one instance, a case which had reached a standstill, the patient began to improve again after one or two large doses had been tried; but we have also often seen setbacks result from too large dosage, and therefore we do not believe in it as a routine procedure. We believe that the use of tuberculin should always be second to strict hygienic treatment even if the patient be in apparently good condition, for we know of the great good which may be accomplished in this way alone.

To conclude, allow us to report an interesting and severe case that resisted class treatment and tuberculin but yielded readily after the patient was sent to a sanatorium.

History.—M. M., a man, aged 26, was referred to us for treatment May 5, 1908. Following measles when he was 11 years old he had numerous attacks of ocular inflammation which seriously damaged his sight and kept him out of work. During several of these attacks he was treated as an in-patient in the Massachusetts Charitable Eye and Ear Infirmary. The attacks were so frequent that he was able to work only five months all told out of the last thirty-six.

Examination.—The patient had swollen lids, intense photophobia and lachrymation; both corneæ were covered with old scars and a well-marked pannus. There was no trachoma. V. O. D. and V. O. S. = hand movements. It was necessary to lead the patient. General examination showed a poorly nourished man with the signs of an old pulmonary tuberculosis at the left apex. Cutaneous reaction positive. Temperature elevated. The patient was in a most despondent condition.

Course of Disease.—In conjunction with the Massachusetts General Hospital Tuberculosis Class we took charge of him and a strict antituberculosis regimen was prescribed, with tuberculin injections and appropriate local treatment. The patient was helped financially, as, outside of what his wife could earn cooking, they had no means of support. Although we did everything in our power for him, his improvement was very slow, and at the end of ten weeks we decided to send him to the state sanatorium at Rutland, at which institution he was admitted July 15. Here his improvement was most rapid; the ocular inflammation had subsided at the end of five weeks, and his vision had increased to 10/200 o. u., as much as he had had for some years previously, according to his former hospital record. He left Rutland after seven weeks, having gained 24 pounds and feeling in better condition than ever before in his life. He resumed his work in a golf-ball factory and has not missed a day in the last six months. He reports occasionally for observation and is careful of his method of living.

7 Hereford St., Boston—54 West Main St., Westboro.

ABSTRACT OF DISCUSSION

Dr. W. H. Wilder, *Chicago*: The results that Dr. Derby has obtained accord closely with those which I have had in the cases I have examined. It is astonishing how frequently in cases of phlyctenulosis we will get a positive reaction to tuberculin tests and how frequently in certain other suspicious eye diseases if we make the cutaneous test we will get a positive reaction. So that these results seem to show that, after all, as v. Pirquet has stated, from 70 to 90 per cent. of individuals will react to this delicate cutaneous test. This would help to bear out the statement of the pathologists that, at the age of 60, 999 individuals in 1,000 have tuberculous lesions. Of course, to believe such a statement must require more credulity than some of us possess, because I do not think the pathologists can positively demonstrate the fact. But at any rate there must be a great deal of latent tuberculosis. If we find that so many of our cases of suspicious eye disease will respond to the tuberculin test, can it be made of any great value as a means of diagnosis? Possibly it may be, and it will be the work of the committee which has been appointed to try to determine if there is any possible relation between the lesion in the eye and the severity of the reaction obtained in the test; also whether there is any relationship between the suspected lesion in the eye and tuberculous lesions elsewhere in the body. Possibly the study of a large number of cases may enable us to arrive at some definite conclusion. Again, it will be of value in the study of an eye lesion of suspicious character to be able to determine whether or not there is a more or less active tuberculous lesion elsewhere, for it will direct treatment to this condition and will teach the ophthalmologist that he must cooperate with the general practitioner or the physician who is familiar with tuberculosis in the management of such cases. Another interesting and important question is whether it is necessary to have tuberculous foci in the eye itself to account for certain diseased conditions, as many of the Germans hold, or whether it is not possible for toxins originating in a tuberculous lesion elsewhere in the body to excite in the delicate structures of the eye inflammation that would take on the form of iritis, cyclitis, keratitis and others of a suspicious nature. I am inclined to think the day will come when we will have proof that toxic inflammation from tubercle elsewhere in the body may be responsible for many lesions of the eye, the etiology of which is now obscure.

Dr. W. C. Posey, Philadelphia: This paper is further evidence of the tuberculous origin of phlyctenulæ, a question which has been much in dispute during the past decade, while the detection of signs pointing to tuberculosis in fifty of the authors' cases out of a possible ninety-two should impress on us, as they suggest, the importance of a thorough physical examination in this class of cases, not only for the advantage of the individuals themselves, but also for the good of the community at large. An article in the April number of the *Klin. Monatsblätter für Augenheilkunde*, by Cohen, has a similar trend, for of 123 adult patients with phlyctenulæ who were collected from Uhthoff's clinic, 63.4 per cent. were tuberculous. It is of interest to remark in the analysis of this group of cases that the diagnosis of tuberculosis elsewhere in the body was established by the older clinical methods, without the means of modern diagnostic aids, most of the observations having been made prior to their discovery. Of particular significance was the fact that the phlyctenulæ in many of the cases were found to occur in the first stages of tuberculosis, and that in a vast majority of the cases there had not been an earlier inflammation of the eyes during childhood.

Drs. Derby and Ayer have discarded the conjunctival test as being occasionally productive of disastrous results and as being but little more convenient than the cutaneous. This perhaps is the present practice of many clinicians and is being more universally pursued. Considerable difficulty certainly attends the endeavor in many cases of suspected tuberculous disease of the eye to ascertain whether a tuberculous element is actually present or not. Thus, when tuberculin is injected for diagnostic purposes, the local reaction, even in undoubted cases of tuberculosis, is often absent, or at least but transient, and when a general reaction is obtained, without local signs of irritation or inflammation, it frequently seems presumptious to conclude with any degree of certainty that the case is one of tuberculosis of the eye. The observation and study of a large series of cases can alone solve the problem, so that in time the varied forms under which tuberculosis occurs in the eye may be differentiated into definite types.

For some years past, I have endeavored to recognize tuberculosis of the cornea at first hand by simple inspection, and have found after the diagnosis had been controlled by tuberculin tests, that the projection of a tongue-like area of yellowish-white infiltrate from the limbus into the interstitial lamellæ of the cornea toward its center and the occurrence of discrete yellow-white oval areas, which appear caseous and avascular, is very significant of tuberculous keratitis, while I have observed the deposition of small rounded areas resembling drops of cold mutton fat on the posterior surface of the cornea or in the lamellæ of the cornea, secondary to tubercle of the iris and of the deeper parts of the eye.

Dr. Derby's suggestion of a tuberculosis class appears to solve the difficulty which all ophthalmologists must have experienced in treating these individuals purely as ophthalmic patients, for but few ophthalmic hospitals are equipped to care properly for such cases, and the establishment of such classes in all cities seems most desirable.

The fact, now presumably fairly well established, that the occurrence of phlyctenulæ in adults as well as children, indicates a tuberculous infection, should be appreciated not only by ophthalmic surgeons, but by general practitioners as well, both for the suggestion which the appearance of the phlyctenulæ may give of the seat of tuberculosis in the system, as well as for the necessity which arises of treating subjects with this ocular disease as possible sources of tuberculous infection to others.

Dr. G. S. Derby, Boston: We lay very little stress on a positive skin reaction, as so many individuals will show it, but if there are two negative reactions tuberculosis can be excluded with reasonable probability.

Symptoms of Bladder Calculi.—Diurnal urgency, pain in the bladder, pain at the external meatus at the end of micturition and the presence of blood corpuscles in the urine should lead one to examine for stone.—C. W. Bonney, in *Therapeutic Gazette*.

TREATMENT OF HOOKWORM DISEASE*

EDWARD E. LINDEMAN, M.D.
TAMPA, FLA.

It has recently been roughly estimated that there are 2,000,000 people in the United States infected with hookworm disease. Since it is a disease prevalent in the country districts of the sandy soil area of the South, where perhaps more recent literature on the subject has not as yet permeated, I have undertaken a discussion of the treatment of hookworm disease, including some practical points from my own observations, with the hope that this article may reach those parts where this information may be new.

THE PARASITE AND ITS MODE OF ENTRANCE

It might be well first to state briefly the life cycle of the parasite producing this disease. The disease is caused by the *Uncinaria americana* (Stiles) which belongs to the roundworm family *(Strongyloidæ)*. This worm is from 7 to 11 mm. long and 1 mm. in diameter. It inhabits the intestinal tract, principally the lower part of the duodenum, the jejunum, and the upper portion of the ileum, where it attaches itself to the mucosa by its dorsal and ventral lips or suckers. It is also armed with a prominent dorso-median buccal tooth, which is simply a hollow tooth-like spine. With this tooth it pierces the intestinal wall to reach the blood-channels, draws blood into itself for food and injects a toxin through the same opening. It thus produces small hemorrhagic erosions on the intestinal wall. Both male and female worms inhabit the intestinal tract. The female worm is very fertile and lays eggs abundantly. These eggs are cast into the exterior world with the feces. As many as 4,000 worms have been found in one individual, and as many as 2,000,000 ova may be discharged in a single stool. Where proper conditions of soil, climate, moisture and oxygen prevail, these eggs readily hatch into larvæ. The larvæ are exceedingly minute, unseen by the naked eye, and are found in soil, drinking-water and food which may be polluted. The larvæ enter the body mainly through two channels: (1) with ingested food and water; (2) through the skin. It is the latter which is regarded by most authorities as the main avenue of entrance, more frequently the skin of the feet, because of the more ready and intimate exposure of these parts to the polluted soil by people going barefoot during the warm (which is the infective) season. The hands and arms are next in frequency as routes of entrance, but the larvæ may gain entrance through any exposed surface with which they come in contact. The larvæ present in the skin produce an itching sensation accompanied by an inflammatory reaction, and sometimes secondary infection of other microorganisms may take place. This condition is commonly known as ground-itch or dew-itch. The larvæ, having pierced the skin, soon gain entrance to the lymph and blood-channels, through which they are carried to the heart, to reach the capillaries of the lungs. They then pass through the capillary walls into the alveolar spaces; from here they migrate through the bronchioles into the bronchi, and then crawl up the trachea to reach the mouth cavity, after which they are swallowed in ordinary acts of deglutition, eating, drinking, etc., and thereby reach the intestinal tract.

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* Read before the Florida State Medical Association, April 6, 1910.

TREATMENT BY THYMOL

There is perhaps no drug whose action is more nearly a specific in the treatment of this disease than is thymol. There are, however, a group of cases, and those usually of the more extreme type, that are not relieved by thymol, and among a number of practitioners this drug has fallen somewhat into disrepute, and other drugs, such as betanaphthol and turpentine, have been substituted. The administration of thymol is not without some danger unless certain necessary precautions are observed. Severe intoxications have not infrequently occurred because of the improper administration of the drug by the profession as well as by the laity.

Further, in other instances thymol has been administered in such form as to pass through the intestinal tract *en masse* with no more effect than pellets of lead. For instance, there have been sent to the bacteriologic laboratory of the State Board of Health of Florida a few stone-like masses about the size of a small marble which were obtained from the stools of children suffering with hookworm disease which were regarded as a concomitant pathologic condition with uncinariasis. These on microscopic examination and chemical analysis proved to be pure thymol. It is self-evident that thymol in such form can have little or no theraputic value. Thymol in this case had been given in a pulverized state in ordinary capsules.

There is, too, a group of cases unrelieved in which thymol has been administered in mucilage of acacia, and in which no such masses as above stated are formed. At the Hookworm Conference in Atlanta, Ga., and in Tampa, Fla., to explain these unrelieved cases it was suggested that there must be some idiosyncrasy or a development of an immunity to the drug.

Now, to clear up these elements of doubt and put the treatment on a safe and rational basis, it is necessary to appreciate the following points:

1. The pharmacology of thymol.
2. The object to be desired in the treatment.
3. The best means of obtaining this object with highest therapeutic value, least dosage and least deleterious effects to the individual.

PHARMACOLOGY

Thymol (*Thymus valgaris*, Linné) occurs in common thyme and several other plants and forms large, colorless, translucent rhombic prisms, having an aromatic, thyme-like odor, and a pungent thyme-like taste, with a slight caustic effect on the mucous membrane of the mouth. It melts at 50 centigrade, is soluble 1,100 parts of water and in less than its own weight of ether, alcohol or chloroform, and is soluble in glacial acetic acid, fixed oils and fats.

TOXICOLOGY

The toxic effect of thymol is obtained when absorbed. These toxic effects are similar to those of the phenol series, but of a somewhat milder grade. In fact, thymol is closely related chemically to phenol, differing only in having a methyl and a propyl radical to replace two of the hydrogen atoms in the benzin ring. In poisoning from its use, locally there is a burning sensation in the stomach and slightly caustic effects on the mucous membranes of the intestines, producing intestinal irritation and evacuation of feces, nausea and vomiting. Tremors and convulsions are induced, though rarely, and less intense than those induced by phenol.

Fatty degeneration of the liver, marked congestion and even consolidation of the lungs have been observed. In the milder forms of poisoning together with the local mild caustic effects and burning sensation in the stomach, there are tingling sensations over various parts of the surface of the body, tremors and muscular twitchings, which may go on to convulsions; in fact, the patient may show any of the symptoms resulting from irritation of the anterior cord. In the more extreme cases of poisoning this is soon followed by collapse; while in others the stage of irritability may be missed, owing to the debility of the patient from disease. The debilitated patients making up the greater group of those poisoned, the more frequent picture is that of apathy, collapse, paralysis and shock, in which stage the patient may succumb. In the stimulating stage the respiration and heart-rate are increased. In the stage of collapse there is a slowing of both heart and respiration, the former being due to direct action on the heart musculature.

Thymol has no toxic effects constitutionally unless in solution and absorbed. When absorbed it has absolutely no therapeutic value in the treatment of hookworm disease. The therapeutic value of thymol is confined entirely to its action on the worm in the intestinal tract. The worm is affected by thymol in crystalline form as well as in solution, and while the solution is more toxic to the parasite, the crystalline form is sufficiently toxic to paralyze or kill it, but it accomplishes this only if the individual crystals reach the individual worm; *it is therefore evident that thymol passing through the* intestinal tract *en masse* can come in contact with relatively very few worms. The more widely disseminated the individual crystals the more worms will they reach and the higher the therapeutic value.

METHOD OF ADMINISTRATION

Thymol has very strong adhesive properties, and when placed in capsules, whether loosely or tightly packed, readily forms a conglomerate, stone-like mass. I was therefore led to experiment with thymol in order to determine how it might be administered to permit the widest dissemination of its crystals. The drug was packed in capsules with different degrees of compactness, in finely and coarsely pulverized states. Acidulated tap water was used as the solvent, and slight stirring was done to imitate gastric conditions. It was found that while some thymol went into suspension, much of it formed solid lumps. Those packed loosely and in a finely pulverized state broke into several lumps, about one-quarter of the amount going into fine suspension; those packed loosely and in a coarser state were a little better divided and suspended; those packed tightly, whether fine or coarse, remained in almost the same state. Cachets were then tried in a similar manner, with perhaps a little better result, but not quite all that was desired. It occurred to me that better results might be obtained by triturating the crystals with a readily soluble substance and packing them loosely in cachets, so that when the drug reached the gastric menstruum the soluble intercrystalline substance would go into solution leaving the thymol in a finely divided and widely disseminated state of suspension. Equal parts of milk-sugar was used as the triturating vehicle. The results were all that could be desired.

Now while the form of administration, as is self-evident, must modify the dosage required, and this fact in a measure explains some cases of hookworm disease not cured by thymol treatment, it does not explain another group of cases treated with thymol put up in mucilage of acacia, some of which it should be noted were of the extreme type. In some of these instances betanaphthol had been used and in others spirits of turpentine, with varied results.

To explain these cases by an acquired tolerance or immunity or some idiosyncrasy to the drug on the part of the individual seems to me to be fallacious. It should be remembered that the treatment of hookworm disease, in reality, is entirely confined to the worm and not to the patient and since the individual as such is not treated, it would be absurd to speak of an immunity or even an idiosyncrasy of the individual to thymol.

It seems to me that the explanation for the failure in the group of cases of unsuccessful thymol treatment is not to be found in a developed immunity or idiosyncrasy of the patient or worm to thymol, but rather in some peculiar physiologic or pathologic conditions present, or in faulty administration which prevents the *drug administered from reaching the parasite for efficient action.*

The form of administration has been touched on in the preceding: now let us see what physiologic or pathologic conditions can prevail which might prevent thymol from coming in contact with the parasite. Theoretically they are as follows:

1. A peculiar mucous or catarrhal condition of the small intestines. The parasite in its effort to hold on to the intestinal wall may be well buried in such mucus, or in the thickened mucosa, thus preventing the drug from coming in contact with it.
2. A viscous or colloidal state of intestinal fluid which might prevent intimate contact of crystals—for instance, a large amount of bile present.
3. The parasites produce small hemorrhagic erosions on the intestinal wall. When, as in the extreme cases, there are erosions enough, thymol may set up considerable irritation, which may produce vigorous peristalsis and thus propel the unattached intestinal contents with a sufficient degree of rapidity, to prevent the worm from being exposed long enough to the drug to be much affected by it. (It might here be stated that in the cases unsuccessfully treated, a partial relief from the disease is always obtained through the thymol; that is to say, a certain number of worms are killed or paralyzed and expelled).
4. The gastric or upper intestinal menstruum may be of a nature to dissolve the drug and permit of its absorption to a sufficient extent to relieve the worm of its toxicity.
5. Thymol may be administered in a form so as to reach relatively few worms, as discussed above.
6. In hookworm disease there is present generally, and in the severe cases always, an extreme of pot-belly, a great debility and a general enteroptosis. With a general enteroptosis and inactivity, dilatation of the stomach is a common association. It is easily seen how a drug may lie for a comparatively long period in such a stomach and fail to reach the parasite. Later, when carthartics are administered, the drug is propelled through the intestines so rapidly as to prevent sufficient exposure of the worms to the drug for efficient action.

That all these factors can play a part in protecting the parasites from the drug must be conceded. The importance of each factor would vary with each individual case, but of all these factors the last seems the more likely. I happened to see a case in a dog a few days ago which would seem to bear out this conclusion. The veterinarian in charge of the case gives the following history:

History.—A large English pointer of fine breed, three years old, considerably emaciated, extremely anemic and weak; mucous membrane white; constipation and no appetite. March 24, 3 p. m., a half ounce of epsom salts given; no action. March 25, 9 a. m., thymol, grains 25, given; 2 p. m., half ounce of epsom salts given; no action. March 26, 8 a. m., castor oil, drams 2; no action. March 26, 11 a. m., I saw the dog for the first time. Its condition was as follows: paralysis, shock, slow heart, slow respiration, fall of temperature, later followed by coma. Rectal irrigations were then given; strychnin, brandy and salt solution were injected subcutaneously. The dog sank slowly and died several hours later.

Autopsy.—General paleness and extreme anemia of all tissues and organs; heart-filaria fifteen in number; stomach full and greatly dilated; pyloric end closed; stomach contents thin, watery fluid; some solid remnants, hairs, etc., and remnants of cachets. The entire intestinal tract was extremely pale and literally covered with hookworms, even the rectum. The mucosa was much thickened with numerous hemorrhagic erosions scattered over it. In this thickened mucosa many of the worms were well buried and obtainable only by scraping with a knife.

Here is a case, if we can use this as an experimental one, of an intestinal system so depleted of blood and debilitated by disease that there was not sufficient power remaining to propel the stomach contents into the intestines. The dilation resulting offered an excellent reservoir for all material ingested. Water was not absorbed because of the epsom salts present. The castor oil administered dissolved what thymol was present in the stomach permitting its absorption, producing the poisoned condition in which the dog was found, and so debilitated was the animal from disease that it could not withstand the intoxication.

This danger in the treatment can be overcome to some extent if the patient be placed on the right side in bed (after administering thymol) as recommended by Stiles. This will permit mechanically more ready passage of stomach contents through the pylorus and incidentally a good deal of the burning sensation of the stomach will be avoided.

TREATMENT

The patient should have nothing to eat from noon of the day previous to the administration day of the thymol. On this day and the day following, fat of any kind, milk, cream, butter, bacon, etc., should be avoided. Whiskey, beer, wine and oils are absolutely interdicted, as all these can dissolve thymol. Early in the evening of the first day sufficient epsom salts should be given for efficient purgation. It is important that the bowels should be well moved. Early next day the dose of thymol decided on should be divided into two parts and given one hour apart. It is best administered in cachets triturated with equal parts of milk-sugar, and before using the cachets should be well softened in water until they are of the consistency of a raw oyster. It is best to put the patient to bed, on the right side. The thymol should be retained for from two to five hours, unless distress or symptoms of intoxication occur. (H. F. Harris, Atlanta, Ga.) Epsom salts should then be used for flushing the bowels and expelling the drug. The following dosage as outlined by the State Board of Health of Florida is considered safe to use:

Under 5 years of age	Up to 8 grains
5 to 10 years of age	8 to 15 grains
10 to 15 years of age	15 to 30 grains
15 to 20 years of age	30 to 45 grains
20 to 60 years of age	45 to 60 grains
Over 60 years of age	45 grains

In determining the size of the dose the *apparent age* and the real weight of the child should be considered. The condition of the heart, the degree of debility and anemia should also be considered. And where these latter conditions prevail to any extent small doses are indicated. The nauseating effects of epsom salts can be considerably lessened if dissolved in the smallest quantity of warm water possible and swallowed. This to be then followed by a large quantity of any mild fluid, even water. The mixing thus takes place in the stomach instead of in the glass. The patient may begin to eat after the bowels are well moved on this day. It is best that they should eat sparingly and avoid distress from engorgement. The same precautions should be observed on this day regarding fats, oils, alcohol, etc.

Once the worm is eradicated, fresh air, sunshine, plenty of water and proper food are the chief requirements for the treatment of the anemia of hookworm disease. Iron, arsenic, tonics and ferruginous vegetables are indicated. The patient should be treated at intervals of one, two or three weeks until the stool is free from eggs or parasites. The more debilitated patients should be treated at longer intervals.

Betanaphthol is not so toxic to the parasite as thymol, but has a more toxic action on the kidneys. The anthelmintic properties of turpentine are less than those of thymol; besides turpentine is less desirable because of its ready absorption and liability to produce an acute nephritis. Pressed thymol tablets should never be used.

REMOVAL OF NEOPLASMS OF THE URINARY BLADDER

A NEW METHOD, EMPLOYING HIGH-FREQUENCY (OUDIN) CURRENTS THROUGH A CATHETERIZING CYSTOSCOPE*

EDWIN BEER, M.D.

Surgeon to Montefiore Home; Assistant Visiting Surgeon to Bellevue Hospital; Assistant Adjunct Surgeon to Mount Sinai Hospital; Junior Surgeon to the New York Neurological Institute; Cystoscopist to the German Hospital

NEW YORK

This brief preliminary report is written with the object of calling the attention of the profession to a new and simple method of destroying new growths of the urinary bladder. Even though my experience is not extensive, limited as it is to two large papillary growths, still the observations made leave no doubt in my mind that the Oudin current, employed as I have employed it, will prove effective in the cure of benign papillomata, as well as useful in malign tumors, papillomatous or not, both as a hemostatic and as a cauterizing agent.[1] My experiences also suggest the usefulness of these currents in many other conditions both in the bladder and in other parts, e. g. tuberculous ulcers of the bladder, prostatic hypertrophy, growths in the urethra, etc.

In March, 1908, I hit on the idea of using the high-frequency current as I now use it. Expert electric manufacturers told me I could not obtain the effects I desired through a water medium; that an air gap was necessary. Moreover, that if I used the current as I intended, it would burn out my cystoscope. Others who had experience with these currents in skin conditions were equally pessimistic. Despite these opinions I ordered from the manufacturer a thoroughly insulated cable, No. French caliber, so that it could be introduced readily through the catheter tunnel of a Nitze catheterizing cystoscope. My experimental work was confined to the removal of skin warts through a water medium I soon convinced myself of the efficacy of this therapy, despite the absence of an air gap. I also tested my Nitze cystoscopes and found that they stood the test perfectly. They were not burned out and I could readily see what was going on at the end of the electrode though very rarely an insignificant variation in the intensity of the light occurred.

Through the courtesy of Dr. A. G. Gerster, I was able to try out this new method in an inoperable tumor of the bladder in a woman of 81. In a second case, that of woman of 66, I employed this method also. Both patients were troubled with hematuria. In the second case the bleeding was very active, while in the first case it was moderate when the treatment was begun. As my experiences in these cases were highly satisfactory, I hasten to lay them before the profession, that others may avail themselves thereof.

TECHNIC, ETC.

Instruments—1. I employed the Oudin current derived from a Wappler machine, placing the rheostat vertically so that one-half the resistance was thrown into the circuit. The spark gap in the muffler was approximately 1/10—1/8 inch.

2. Nitze, double-catheter cystoscope was used. In one catheter tunnel, I placed the electrode introducing it just as one introduces a catheter while to the other catheter tunnel I attached a tube for irrigation.

3. The electrode was a simple 6-ply cable of copper wire thoroughly insulated with rubber and cut off squarely at the vesical end. It measured No. 6 French and was made for me by the Wappler firm.

Application—The applications were made directly to the growth, the electrode being pushed a short distance in among the villi under the guidance of the eye and then the current was turned on for fifteen to thirty seconds at various points. The bladder was distended with distilled water. Experience may show that some other medium is preferable in view of the fact that ionization with magnesia appears particularly effective in removal of skin papillomata.

EFFECTS AND RESULTS

The immediate visible effects are very striking. No spark is seen even when the full current is thrown on without any resistance. While the current is on gas is generated quite freely and is seen bubbling out of the growth. If the point of application is superficial we can readily see a blanching of the tissues about the point of application; and at the spot where the electrode's point rested, the tissues are blackened—carbonized. As the electrode is withdrawn from the growth, very frequently it is found to be adherent to the villi, and as it is pulled on, the whole tumor moves with the electrode, which finally comes away with a piece of the tumor well baked to its vesical end.[2] This is only rarely followed by bleeding and a reapplication of the current at the same spot controls this bleeding. The great heat generated melts the insulating rubber at the end of the electrode so that one has to cut it off squarely from time to time, to prevent the wires from protruding freely and injuring the bladder wall.

In the second case the very first application of the current controlled the bleeding to such an extent that cystoscopy, which had been almost impossible, owing to the excessively rapid clouding of the medium from the arterial bleeding, became fairly easy. Eight applications at one sitting to various parts of the growth, aggregating in all four minutes, controlled the bleeding. In the first case, the hematuria was equally well controlled, but the result was less striking than in Case 2, in which the severe hemorrhage ceased at once and intensely bloody urine gave way to normal yellow urine.

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* From the First Surgical Service of Mount Sinai Hospital.

[1] In early cases of malignant disease a complete destruction may be possible

[2] These fragments have been used for microscopic examination.

Such applications of fifteen to thirty seconds seem to cause a very well-marked necrosis, which is in part due to the heat engendered. Other factors probably contribute to the final result. How much ionization, electrolysis and other factors contribute, I cannot state as yet. By making applications at eight to twelve different points in the two large tumors treated, a total necrosis of all the villous outgrowths followed with absolute cessation of hematuria. Gradually during three to five weeks the dead tissue separated from the healthy and the tumors were expelled in small masses, as the mucous membrane gradually grew in around the base of the dead tissue.[3] No ulcers were visible at any time.

The treatment caused no more discomfort than an ordinary cystoscopy. The bladder mucous membrane was but little affected by the application though some congestion and trigonitis developed in the vicinity of the growths.

At some future date, I shall report these cases in full, which is hardly necessary for this preliminary note.

116 West Fifty-eighth Street.

ANIMAL EXPERIMENTATION IN RELATION TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

JOSEPH ERLANGER, M.D.
MADISON, WIS.

(Continued from page 1684)

II. MODERN VIEWS OF AND METHODS OF STUDYING DISEASES OF THE CIRCULATION

In Part I of this paper the attempt has been made to present in the briefest possible form the fact that we owe our knowledge of the circulation primarily to animal experimentation. This paper has been written for the purpose of showing the practical bearings of the knowledge so gained on our understanding of certain phases of human pathology.

There could be no more emphatic way of bringing home to the practicing physician the practical results, so far as the cardiovascular system is concerned, that have accrued through the application to human pathology of the results of experiments on animals than to transcribe in full for his consideration the parts dealing with disease of the blood-vessel system, first, from some work that was standard before the Renaissance, i. e., before the importance of animal experimentation was fully realized, and, secondly, from a work that is standard to-day, calling attention to the differences between them and indicating how far such differences are due more or less directly to experiments on animals. Unfortunately, however, the limited scope of this paper precludes the full treatment of the subject in this way. I must, therefore, content myself for the present with brief extracts and discussions which, it is hoped, will furnish the reader material about which he may group his own ideas on the subject. It should be added that the extracts given below have not been selected at random, but only after careful consideration and as representing the views which, in my opinion, are in closest accord with those of the most enlightened thought of the time.

I select as the work from which to quote the views held prior to the revival of learning, "The Seven Books of Paulus Ægineta with a Commentary Embracing a Complete View of the Knowledge Possessed by the Greeks, Romans, and Arabians on all Subjects Connected with Medicine and Surgery,"[1] which dates from the seventh century. This work has been selected, first, because of its accessibility, and, secondly, because it purports to be a more or less complete compendium of the then known medicine.

The section on the heart is brief and may be quoted practically without abbreviation:

> When the heart itself is primarily affected, the case is far beyond all medical aid, occasioning sudden death; and also in the inflammations and erysipelas of it, strong distempers in very acute fevers, and hemorrhages when it is wounded, especially in the left ventricle. When it is affected sympathetically with the brain, the liver, the orifice of the stomach, and from sorrow, fear, and many other causes, it brings on the affection called syncope, being a sudden collapse of the vital powers, indicated by prostration of strength, delinquium animi, a small pulse, coldness of the extremities and copious perspiration. When this affection is of a violent nature, it also is irremediable; but if the strength stands out, it may sometimes be relieved. But strong palpitations of the heart often arise from a fulness or effervescence of its blood. When, therefore, the heart is overheated, it renders the respiration large and dense, but when it is too cold, the respiration is small and rare. The complete cure of syncope of the heart, when it occurs among the symptoms of fever, we have treated in the Second Book. This only may be added, that when collapse gains ground after friction and ointments have been applied to the extremities, and after purification of the floor, and other cooling means, we must sprinkle on the parts of the body which are sweating powdered myrtle, limolian earth, or amber, or pomegranate-rind with marena, or Samian earth with gum; and cataplasms of mustard or pellitory, adarce, are to be applied to the cold extremities, as far as to the groins and armpits. The food should be bread out of water, or out of cold diluted wine, swine's feet and joints and snout, and fowls; all things to be given in a cold state. . . .[2]

Under the topic of "palpitation of the heart" there is found the following interesting passage:

> "I knew a certain person," says Galen, "who suffered an attack of palpitation of the heart every year in the season of spring. Wherefore, having for three years experienced benefit from venesection, in the fourth he anticipated the attack by getting bled, and so escaped from it, and did so for many years afterwards, using at the same time a suitable diet. And yet even he died before attaining old age, as every other person in this complaint does, some being suddenly cut off in acute fevers by syncope; but some of them without syncope, being unexpectedly deprived of life, as if by apoplexy. The majority of those who are thus affected do not reach the fiftieth year of age, but pass the fortieth."

Finally the ideas held by Paul of Ægina in regard to dropsy are set forth in the following passage:

> Where the liver is greatly congealed, sometimes primarily, as when it has been inflamed, indurated, or otherwise affected, or when from sympathy with other parts the process of sanguinification ceases, and the affection is called dropsy. . . . But, for

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Fourteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, the circulation of the blood, protozoan tropical diseases, etc.

[3] If the flat base of the growth remains after the sloughing of the necrotic villi, these small areas must be treated in turn directly, to produce a cure. To avoid perforating the bladder, shorter application of fifteen seconds should be used here, such as I used in Case 1.

[1] Transl. by Adams, London, 1844.

[2] Paul of Ægina: Seven Books . . . , i, 501.

> the most part, it arises from hardness and scirrhus about the spleen and liver, and from chronic deflexions about the intestines; whereby it happens that the belly is swelled, while the rest of the body is melted owing to its not being nourished. . . . Sometimes throughout the whole body a colder and more pituitous blood is collected, either coming from the liver, or deriving its origin from a melting down of the flesh of the whole body, which is as it were converted into water. . . . In treating these complaints, we commence generally with evacuation; but in ascites and tympanites it is by administering hydragogue medicine; and in anasarca by blood-letting. . . . When those who have ascites are not benefited by any of the remedies already described, we must have recourse to paracentesis, which does not apply to any of the other varieties of dropsy.[3]

The quotations cited above show that the theory and practice of the time of Paul of Ægina, which are not to be scoffed at, are based on the physiology of Galen, who, by some, is considered the founder of physiologic experiments, carefully planned and executed.[4] It will do no harm to call attention again to the fact that the first careful experimenter, and the last to experiment prior to the Renaissance, was the authority of all practitioners through the long period of the dark and middle ages. And, it may be added, that so far as Galen's followers expounded views that were the result of experiments on animals, just so far were they indebted to animal experimentation for their clinical knowledge. It would carry me too far afield to attempt a detailed exposition of this dependence.

Nor is the modern practitioner any less dependent on the results of animal experimentation than were his predecessors.

> The problem for a physician to solve when confronted with a case of circulatory disease is, which of the many factors in the maintenance of the circulation are at fault? . . . The factors in the normal maintenance of the circulation are: an efficient myocardium with a sound directing innervation, efficient and unobstructing valves at the atrioventricular and arterial orifices, an aorta and branches of suitable caliber with elastic walls.[5]

The part that animal experimentation has played in determining this problem may be made clear by paraphrasing it to suit our purposes, thus: The animal experiments of Harvey, Malpighi and others have demonstrated that in animals the blood is propelled through the blood-vessels in a circle through the pump-like action of the heart, whose active tissue consists of muscle (experiments of Harvey,[6] Stenson[7] and Borelli[8]), not of parenchyma.[9] Clinical experience, viewed in the light of Harvey's experiments, has shown that in man, too, the blood circulates. In disease of the cardiovascular system the circulatory mechanism does not work properly. What is at fault? It may be Harvey's force-pump, not the (mainly) suction-pump of the earlier writers. The pump may fail to work efficiently through unfavorable action of the nerves which regulate its movements. That the nerves of the heart do not determine its action was demonstrated by the experiments of Haller[10] (1757); that the work of the automatic heart is regulated by its nerves was demonstrated by the experiments of the Weber brothers[11] (1845), who discovered the tonic action of the vagus mechanism, and by von Betzold[12] and Cyon,[12] who determined through animal experimentation the action of the accelerator nerve. The contracting myocardium can move the blood in a circle only through the medium of the valves of the heart. It is obvious that any one familiar with the structure of the valves could easily infer their mechanical action, provided the information was at hand as to whether the heart acted after the fashion of a force-pump or a suction-pump or both. Erasistratus seems to have been familiar with the action of the valves, but, swayed as he was by the belief that the heart alternately took in and expelled materials, his knowledge served neither his contemporaries nor his successors any useful purpose. After Harvey had, however, demonstrated the true action of the heart and after this action had been more convincingly demonstrated by the animal experiments of Marey[13] and others, further experiments were needed only for the purpose of working out the finer details of the valvular mechanisms. The need of "efficient and unobstructing valves" became obvious. The mechanical advantages of elastic tubing in the maintenance of the circulation were pointed out by the animal experimenter, Borelli,[14] and the whole question was studied in greater detail by S. H. Weber[15] (1850).

All of the factors in the maintenance of the circulation, then, which a modern clinician considers of prime importance have been brought to light directly or indirectly through animal experiments.

Pre-Harveian treatises on diseases of the blood-vessel system, therefore, differ from modern works on the same subject in at least two fundamental respects: 1. The foundation of the latter consists of a clear conception of the function of the parts concerned, this conception being based for the most part on demonstrated facts. 2. It is recognized in modern treatises that disease is due to disturbed function.

It is interesting to trace in somewhat greater detail the effect that the discovery of the circulation of the blood and the consequent renewed activity in experimental physiology had on the discovery of diseases of the heart. It has been shown that before the time of Harvey diseases of the blood-vessel system received very scant mention in the standard texts. Excepting treatises on the pulse and on bleeding, the writings on the subject were very scant indeed, while but very few distinct diseases were recognized. Of diseases of the heart and symptoms, mention is made in pre-Harveian literature only of hydrops pericardii, syncope, palpitation, erysipelas, abscess, tumors and wounds, the mythical *cor hirsutum,* and, late in the sixteenth century, dilatation, and these conditions were very imperfectly understood.

On the other hand, within the hundred years whose beginning is marked by the publication of Harvey's tract (1628) distinct progress toward the modern conception of cardiovascular disease can be discerned. Harvey himself describes a case of rupture of the left ventricle, and a case of *cor bovinum* with dilatation of the aorta, together with the symptoms during life. Lower, one of a trio of brilliant animal experimenters of Harvey's time, discusses hydropericardium as a result of venous stasis, and also a case of adhesive pericarditis.[16] Cooper described aortic insufficiency and appreciated its significance.[17] The same lesion as well as stenosis of the mitral orifice, with an ingenious explanation of the pulse quality in that disease, as well as many other interesting references to cardiac disease encountered in the course of his practice, are mentioned by Vieussens in a work devoted primarily to the normal structure and functions of the heart.[18] Finally, in a work on the movement of the heart and on aneurisms, Lancisi makes many important contributions to cardiac pathology and pathologic physiology.[19] Besides making many other valuable additions to our knowledge, he ascribes sudden death to structural defects, mechanical obstructions and nervous diseases of the heart. He is the first to call attention clearly to the significance of engorgement of the veins of the neck in dilatation of the right cavities of the heart, a diagnostic sign of great importance which could not have been comprehended had Lancisi had at his disposal only the ancient view that the veins and the blood originate in the liver. In this connection he speaks of tricuspid insufficiency. He also understood almost perfectly the symptoms of dilatation of the heart and their cause.

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[3] Paul of Ægina: Seven Books . . . , i, 569.

[4] Neuburger and Pagel: Handbuch der Geschichte de Medizin, i, 572.

[5] Hoover: In Osler's Modern Medicine.

[6] Harvey: De Motu Cordis.

[7] Stenson: De Musculis . . . , 1664. Quoted in Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 343.

[8] Borelli: De Motu Animalium, 1681. Quoted in Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 344.

[9] See Ozanam: La circulation et le pouls, Paris, 1886, p. 75.

[10] Quoted by Howell: Text-Book of Physiology, 1905, p. 496.

[11] Quoted by Howell: Text-Book of Physiology, 1905, p. 513.

[12] See Richet's Dictionnaire de Physiologie, 1900, p. 103.

[13] Trav. du laboratoire de Marey, 1877, iii.

[14] Borelli: De Motu Animalium, 1681. Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 336.

[15] Abstr. in Luciani: Lehrbuch der Physiologie, i, 191.

[16] Lower, Richard: Tractatus de Corde, 1669. Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 634.

The most important of the early works on diseases of the heart appeared, however, something over a century later than Harvey's great contribution. This is Senac's "Treatise on the Structure of the Heart, on its Action and its Diseases" (Paris, 1749). Perhaps the most striking feature of this work is its modernness. There is no difficulty in comprehending the conditions described by the author; so modern are the thoughts that the reader can hardly believe that he has before him a work written over one and one-half centuries ago. I am of the opinion that Senac's pre-eminence in the field of cardiac pathology must be attributed largely to his grasp of the anatomy and physiology of the heart. However this may be, it is not without significance that of the two large volumes Senac has written on this subject about one and one-half are devoted to an exposition of the anatomy and physiology of the circulation.

Of his many important contributions, space will permit of reference to but one. To Senac must be attributed the recognition of the venous pulse as a diagnostic sign. At the same time he recognizes the most important factor in its production. Speaking of dilatation of the right auricle, he says (p. 411): "It is evident that dilatation of the vena cava should be no less frequent; the blood is pushed with force when contraction diminishes the cavity, and this is the cause of a singular phenomenon; the jugular veins beat with regularity. . . ." Whether Senac was here dealing with the pulse produced by a hypertrophied right auricle or by regurgitation through the tricuspid orifice cannot be determined. From our standpoint, however, it matters little, since in either case the phenomenon, without a knowledge of the "motion of the heart," would have been without significance as a diagnostic sign.

At about the same time Morgagni,[20] the father of pathologic anatomy, called particular attention to the mechanism of the circulatory disturbances caused by valvular lesions and explained the symptom of cyanosis as a congestion of blood.

DEVELOPMENT OF CLINICAL METHODS

Through animal experimentation coupled with inferences from anatomy, the circulation of the blood in animals was demonstrated. Observations on human beings sufficed to show that the results of animal experiments were applicable to man without change. And finally clinical conditions were gradually recognized in the light of normal function and a more logical classification of disease became possible. Except, however, the relation between right-sided lesions and venous engorgement and pulsation, exact methods of recognizing pathologic conditions in living man were, aside from the evident symptoms exhibited by the patient, almost entirely lacking. It is to the relation which the development of these methods bears to animal experimentation that attention will next be directed.

At the outset it should be made clear that the problem of developing methods must, from the nature of the case, be largely clinical, since what are desired are methods for the detection of conditions which are commonly seen in man, and rarely in animals, and which may be studied in animals usually only after the diseased condition as disclosed in man has been reproduced in animals.

The methods now employed by the physician in his effort to detect deranged function of the organs of the circulation are usually classified under the heads of inspection, palpation, percussion and auscultation. Three of these principles, namely, inspection, palpation and auscultation, are as old as the seeing eye, the feeling hand and the hearing ear. Their origin, therefore, bears no relation to animal experiments. The same statement is not, however, true of their subsequent development and elaboration. The eye must be trained to see and the hand to feel. Few of us are gifted with the power of seeing or feeling what others before us have failed to see or feel. Yet the eye or hand when provided with a working hypothesis or a demonstrated fact can often discover or discern phenomena which otherwise might have escaped them entirely. For instance, Galen, than whom the world has had no keener observer, must frequently have watched the beating heart exposed in animals—he actually records having seen the beating heart of man, exposed by disease—yet he failed to recognize what Harvey discovered in the same way, but probably with his working hypothesis more or less fully developed, namely, that the active phase of the heart's motion, and the phase corresponding with the pulse in the arteries, is its systole and not its diastole. To the student of to-day, guided, as he is, by demonstrated fact, it is almost inconceivable that any one could for a moment have held any but our present view in regard to the motion of the heart.

Inspection

And so it is that to-day pallor, cyanosis, dyspnea, pulsation in the veins and arteries, as well as many other visible signs of disease are quickly recognized even by the beginner and their significance almost as quickly grasped.

Whereas pallor now, and as was probably the case even at the time of Hippocrates, denotes bloodlessness, we of to-day have learned to distinguish between pallor of several different origins; for example, the pallor of anemia, of deficient heart action (of nervous origin),[21] of deficient vasomotor tone in the splanchnic area,[22] the two latter conceptions arising out of animal experiments, and the pallor of localized vasomotor overaction,[23] likewise a conception which the clinician owes to physiologic experiments. The ability to distinguish these and other types of pallor is not merely an accomplishment devoid of all practicality; rather it is through this ability that the practitioner is placed in a position to discover causes and to remove them by means of rational treatment directed specifically to them and, if it is so desired, to nothing else.

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[17] Cooper: Phil. Tr., London, 1705, No. 299. Quoted by Gibson: in Osler's Modern Medicine.

[18] Vieussens: Traité nouveau de la structure et des causes des movements naturel du cœur, 1715.

[19] Lancisi: De Motu Cordis et de Aneurysmatibus, Rome, 1728. Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 635; and Rosenstein: in Ziemssen's Handbuch, Ed. 2, 1879, vi.

[20] Morgagni: De Sedibus et Causis Morborum, Ven., 1761. Quoted by Ziemssen: Handbuch der speciellen Pathologie, etc., Ed. 2, 1879, iv.

[21] Goltz: Virchows Arch. f. path. Anat., 1863, xxvi, 11.

[22] Ludwig and Cyon, 1866. Quoted by Luciani: Lehrbuch der Physiologie, i, 281.

To be somewhat more specific, I shall quote for purposes of illustration a passage from Paul of Ægina. Under the title of "Deliquium Animi or Swooning" (one of the topics treated under "Fevers") this author says:[24]

> Several strong ligatures are likewise to be applied; when the evacuations are downward, to the arms, and, when upward, to the legs. The patients are also to be placed in an easy erect posture, and a cupping instrument applied, so as to produce revulsion to the opposite part of the body. . . .

It is quite unnecessary to call the attention of the reader to the points at which the above (which probably is largely Galen's) treatment is at variance with ours, which is dependent on modern conceptions, both mechanical (Spallanzani[25] (1729), Haller,[26] and others) and vosomotor (Bernard[23] and others) of the circulation.

Cyanosis, too, has always been recognized; but how, in the absence of facts brought to light by animal experimentation, could the distinction be made between the cyanosis of acquired heart disease, where it always is an indication of back-pressure into the veins from a congested right heart,[26] the cyanosis of insufficiently aerated blood (Lower, Mayow and Guericke, Lavoisier and others[27]) and the cyanosis of local asphyxia, probably of vasomotor origin (Bernard,[23] Thompson[28] and others).

Dyspnea as a symptom of cardiovascular disease is occasionally hinted at by the early writers. Thus, Paul of Ægina says: "When the heart is overheated it renders the respiration large and dense, but when it is too cold the respiration is small and rare."[29] This relation between the heart and the respiration was probably suggested by the Galenic doctrine that the main functions of respiration were to remove from the body the fuliginous vapors and to cool the blood which is warmed by the innate heat of the heart. That there is an element of truth in this doctrine cannot be denied (and we should not lose sight of the fact that this, in large part, is the fruit of animal experiments), yet it is evident that such a view would have been entirely inadequate to bring to light the true clinical significance of cardiac dyspnea. Deficient internal respiration due to slowing of the blood-stream (a sequel to the demonstration of the circulation) and engorgement of the lungs, on which depends also the hemoptysis of heart disease (Albertini[30]), now account quite satisfactorily for this condition and suggest lines of treatment.

Palpation

The way in which the animal experimenter has helped our hands to feel for clinical states also may be illustrated by a few examples.

From time immemorial the pulse has been held to have great diagnostic value. Indeed, until quite recently and even now in some parts of the world, China, for instance, a great deal more significance was or is attributed to the pulse than is justified by experiment. The result was that classification of the pulse was carried to a degree of refinement that is bewildering. Thus, Sanctorius, in 1625, recognizes seventy-three significant kinds of pulse.[31] His time probably marks the pinnacle of pulse analysis. With the advent of careful experimental methods, as laid down by Harvey, and largely through the efforts of experimentalists, the Weber brothers[32] in particular, and down even to the present day[33] the number of significant varieties of pulse has constantly diminished. And, what is of far greater interest, the significance of the few varieties now recognized has become far more definite. The first step toward this simplification was made by Harvey when he recognized the right relation between the contraction of the heart and the pulse in the arteries. Paul of Ægina thus explains the Galenic view of the pulse:

> The pulse, is a movement of the heart and arteries, taking place by a diastole and systole. Its object is twofold; for by the diastole, which is, as it were, an unfolding and expansion of the artery, the cold air enters, ventilating and resuscitating the animal vigor . . .; and by the systole, which is, as it were, a falling down and contraction of the circumference of the artery towards the center, the evacuation of the fuliginous superfluities is effected. . . . They (the arteries) arise from the heart, and are distributed to all parts of the body, and, therefore, all the arteries pulsate in a similar manner and like the heart, so that from one of them you may judge concerning all the rest.[34]

The fact that "all the arteries pulsate in a similar manner and like the heart" is the very foundation of the diagnostic significance of the pulse. Naturally, however, the errors in the Galenic conception dragged into medicine along with them many misconceptions with regard to the mechanism of the pulse, and consequently led the physician to feel events which actually do not transpire. For instance, we find that, in accord with the idea that the pulse consists of an active systole and an even more active diastole of the artery itself, the Galenists divided the time of rest between pulses into the diastolic rest and the systolic rest. With the adoption of the views on the pulse as determined by Harvey, by the Weber brothers, animal experimenters, and with the invention of the first practical sphygmograph by animal experimenters (Vierordt[35] and Marey) the clinicians came into the right conception as to the form and time relations of the pulse: the distinction made by the Galenists, which we now know to be without foundation in fact, is no longer taught. The chief value of the sphygmograph, it should here be added, does not consist in the means it affords us of making for purposes of study a graphic record of the pulse, although this result is not to be undervalued; rather it is that the knowledge of the true form of the pulse-wave as determined with the sphygmograph makes it possible for the student to discern more easily and to value by simple palpation what otherwise he might never, or only after diligent application, learn to discover.

It may reasonably be doubted whether the Galenists had any clear ideas in regard to pressure and pressure variations in the arteries and veins. It is true that in

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23. Bernard and Brown-Séquard, 1851-2; Quoted in Schäfer's Text-Book of Physiology, 1900, ii, 131.
24. Paul of Ægina: Seven Books . . . , i, 327.
25. Quoted by Ozanam: La circulation et le pouls, p. 110.
26. Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 351.
27. Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 341 et seq.
28. Thompson: Jour. Physiol., 1894, xvii, 120.
29. Paul of Ægina: Seven Books . . . , i, 501.
30. Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 636
31. Quoted by Ozanam: La circulation et le pouls, p. 49.
32. Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 373.
33. Frank: Ztschr. f. Biol., 1905, xlvi, 441.
34. Paul of Ægina: Seven Books . . . , i, 202.
35. Vierordt: Die Lehre vom Arterienpuls in gesunden und kranken Zuständen, Brunswick, 1855.

their classification of pulses they speak of the "consistence of the body of the artery"[36] and distinguish three varieties thereof, namely, hard, soft and moderate; yet it cannot be made out from the context whether "consistence" is a property of the arterial wall proper or one imparted to it through the pressure of the blood in the lumen.

However this may be, we owe to the Rev. Stephen Hales[37] the demonstration, by means of his classical experiments on animals, of the pressure in the arteries and veins and some of their variations. These experiments, multiplied and analyzed by subsequent investigations (Ludwig,[38] Marey[39] and others), gave to the practitioner a new clinical idea, that of attempting to determine by palpation the degree of arterial tension and to correlate tension with the clinical picture as a whole.

It was Traube who introduced the term "tension of the arterial wall" into the clinic. He had so often felt of the exposed artery of animals and had so often compared this with the pressure as measured by a manometer connected with the artery that he was in a position to estimate through palpation alone the pressures in man.[40] But Traube's method of training the touch is not a practical one for general use. Furthermore, palpation of pulse tension, like palpation of pulse form, had to be controlled and taught with the aid of some instrument of greater precision than the finger. The sphygmomanometer, the first practical form of which was devised by an animal experimenter and clinician (von Basch[41]), and which has been tested by animal experiments, was the result of this need. With this instrument Cushing,[42] guided by experiments performed on animals, discovered not only a sign of intracranial hemorrhage, but also a signal for operative interference in that condition. Most of the work in this field, however, is so recent that it is hardly necessary to refer specifically to other practical results that have come of it in the diagnosis, prognosis and treatment[43] of cardiovascular disease. I cannot refrain, however, from making a brief reference to a recent report by Williamson showing the prognostic value of blood-pressure estimations. Of seventeen patients with a blood-pressure over 200 mm. Hg. (the normal is about 120) Williamson was able to keep track of thirteen. Of these, eight had died within from two to three years.[44]

Neither inspection nor digital palpation sufficed for the correct analysis of the venous pulse. This was not possible until we had at hand the results of animal experiments (Riegel,[45] Frédéricq,[46] Porter[47] and others) and until such results had been applied practically in the analysis of the human venous pulse (Riegel,[45] Mackenzie,[48] and others) through the use of graphic methods primarily developed by animal experimenters (Ludwig, Marey and others). This whole subject is so new that it is quite unnecessary to remind the clinician of the practical results in the diagnosis of cardiac disease that have accrued therefrom.

Percussion

The direct object of percussion is anatomic rather than physiologic; it seeks to determine the limits of organs and the nature of their contents. Its indirect object, however, is to discover disturbed function. It therefore follows that the intelligent interpretation of the secrets brought to light by percussion can be made only by one who is familiar with the physiology, normal and pathologic, of the organs of the body. I quote in this connection the views on this subject held by Corvisart, the practitioner first to employ intelligently the method of percussion for the purpose of discerning cardiac disease. In his epoch-making work, in which are set forth the results of his clinical observations, Corvisart first discusses the relation of the development of anatomy and of pathologic anatomy to diseases of the heart and then proceeds to say:

> But it were very erroneous to think morbid anatomy sufficient to accomplish this end; it is quite the reverse; the physician who does not unite physiology [when I say physiology, I mean, once for all, the physiology of experience and observation (ever-cautious of the too easy indications from analogy) but not the systematic physiology which is often supposing, and constantly explaining] with anatomy will ever remain a more or less dextrous, industrious, and patient inquirer, but he will never become a firm and decisive practitioner, particularly in the treatment of the organic lesions.[49]

The facts brought to light by percussion, then, are, in the opinion of the founder of cardiac nosology, of the greatest significance only when viewed from the standpoint of experimental physiology.

Auscultation

Who, if not the practicing physician, would be expected to discover the sounds emitted by the beating heart? The nature of his work requires that the clinician keep alert all of his senses in his effort to bring to light the diseases he may encounter in his practice. The time and energy devoted to human beings for this purpose far exceed those devoted to animals. Yet Harvey, animal experimenter, as well as clinician, seems to have been the first to call attention to the fact that, simultaneously with pulsation, a sound can be heard in the chest.[50] To the practitioner Laennec, however, belongs the credit of developing clinical auscultation.[51] Whether or not Laennec himself performed experiments on animals I have been unable to determine. As a pupil of Corvisart (see above) he must, however, have taken at least an active interest in experimental physiology. That he did avail himself of the results of animal experimentation in the interpretation of auscultatory phenomena is seen in the following quotation, which at the same time will serve to indicate that had Laennec had just a little more first-hand knowledge of the action of the heart he might have succeeded in making a better interpretation of the facts revealed by his clinical observations.

> At the moment of the arterial pulse the ear is slightly elevated by an isochronous motion of the heart, which is accompanied by a somewhat dull, though distinct sound. This is the contraction of the ventricles. Immediately after, and without any interval, a noise resembling that of a valve, or a whip, or the lapping of a dog, announces the contraction of the auricles. . . . Immediately after the systole of the auricles there is a very short, yet well marked interval of repose. . . . This state of quietude after the contraction of the auricles

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36. Paul of Ægina: Seven Books . . . , i, 202, et seq.
37. Hales, Stephen: Statical Essays, 1733.
38. Ludwig: Arch. f. Physiol., 1847, p. 243.
39. Chauveau and Marey: Mém. Acad. de med., 1863, xxvi, 302.
40. Quoted by von Basch: Berl. klin. Wchnschr., 1887, xxiv, 179.
41. Von Basch: Ztschr. f. klin. Med., 1880, ii, 79.
42. Cushing: Am. Jour. Med. Sc., 1903, cxxv, 1017.
43. Oliver: Treatment of High Blood-Pressure, Med. Press and Circular, Feb. 2, 1910.
44. Williamson: Clin. Jour., June 30, 1909.
45. Riegel: Deutsch. Arch. f. klin. Med., 1882, xxxi, 1, 471.
46. Frédéricq: Trav. du. laboratoire de Liège, 1890, iii, 85.
47. Porter: Jour. Physiol., 1892, xiii, 513.
48. Mackenzie: Brit. Med. Jour., March and April, 1905.
49. Corvisart: Essai sur les maladies et les lésions organiques du cœur . . . , 1806; transl. by Gates, 1812.
50. Luciani: Lehrbuch der Physiologie, 1905, i, 152.
51. Laennec: Traité de l'auscultation médiate . . . , 1819; transl. by Forbes, 1823.

does not appear to have been known to Haller as a natural condition.[52]

Laennec therefore accepts without question the fact shown by Harvey and later first utilized by Albertini[53] as a diagnostic sign, that the apex-beat occurs with systole; while at the same time he calls attention to what he believes to be an oversight on the part of Haller—by many considered the father of modern experimental physiology—in regard to the time relation of auricular and ventricular systole.

But if Laennec had only taken the pains to examine an exposed beating heart in the light of his clinical observations, he never would have made the mistake of attributing the second sound to the contraction of the auricle, nor would he so quickly have jumped to an erroneous conclusion in the face of the results of direct experimental observation. Not very many years had elapsed, however, when Turner,[54] interpreting correctly the results of physiologic experiments as recorded in Haller's "Elementa," objected to Laennec's views on the cause of the second sound on the ground that the contraction of the auricles precedes that of the ventricles, and does not follow it as Laennec had assumed.

The limits of this paper make it impossible to trace for the reader the development of our knowledge of the cause of the heart sounds.[55] The statement must suffice that through combined clinical (Laennec, Skoda, etc.) and experimental observation, the most noteworthy of which were made by a committee of the British association under the leadership of Williams,[56] and the later experiments of Hürthle[57] and others, we are now quite certain of the true relations which the sounds bear to the events of the cardiac cycle, notwithstanding the existence at the present time of some uncertainty as to the causes of some of the normal sounds. With regard to abnormal heart-sounds, deductions from normal physiology as well as experiments in pathologic physiology have served to indicate to the clinician their meaning and even their diagnostic value. For example, a ringing aortic second sound indicates to the clinician an abnormally high aortic tension. Harvey's experiments in themselves might have suggested this, but the conclusive proof of it was offered by the experiments of Williams and others, who showed that the second sound arises in the arterial valves and that its intensity diminishes when the arterial tension is lowered. If the reader is desirous of further instances of this nature he may consult any of the modern handbooks on diseases of the heart; for example, the article by Gibson on cardiac insufficiency in Osler's "Modern Medicine," which he will find to be practically an article on applied physiology—physiology made up almost exclusively of experiments on animals.

(Chapter III will appear next week)

148 West Gorham Street.

Wassermann Test for Determination of Paternity.—Hochsinger reports some cases of a child born with inherited syphilis, but neither husband nor wife showed any traces of the disease and both gave a negative seroreaction or the woman alone responded positively. In each instance the circumstance was cleared up by the mother's confession, the paternity being extraconjugal. His communication is published in the *Mitt. d. Gesellsch. f. inn. Med. u. Kinderh.*, ix, 1910, page 53.

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[52] Laennec: Traité de l'auscultation médiate . . . , p. 256.

[53] Quoted by Ziemssen: Handbuch der speciellen Pathologie, etc., 1879, vi.

[54] Ref. Luciani: Lehrbuch der Physiologie, 1905, i, 152.

[55] An excellent account of this subject is given by Luciani: Lehrbuch der Physiologie, 1905, i, 152.

[56] Report of the Brit. Assn., 1836, vi, 265.

[57] Hürthle: Arch. f. d. ges. Physiol., 1895, ix, 263.

SOME ALLEGED EFFECTS OF SODIUM BENZOATE AND BENZOIC ACID

C. A. HERTER, M.D.
U. S. Referee, Professor of Pharmacology, Columbia University; Consulting Physician, City Hospital
NEW YORK

In a recent number of this journal[1] Dr. D. R. Lucas has published certain statements in regard to the action of benzoate of soda which are so much at variance with facts as to call for criticism and correction. The circumstance that these statements have emerged from the laboratory of a leading university is liable to secure for them a hearing which would scarcely be accorded otherwise.

I have no intention of entering here on a detailed examination of the claims set forth in the paper to which I refer; but there are a few points on which I deem it my duty to make at least some comment, despite the fact that this task is highly distasteful to me.

I

At the beginning of the paper there is presented a table showing the influence of various drugs on the action of ferments. This table is based on data given many years ago by T. Lauder Brunton and is designed to show that benzoic acid exerts a relatively strong inhibiting action on emulsin, pepsin, etc. The generalization is then made that from these data it is evident that the inhibiting action of the given amounts of benzoic acid in combined form (e. g. sodium benzoate) is very much weaker than when the benzoic acid is free. This statement, which on superficial observation appears very damaging to benzoic acid, is exactly paralleled by the platitude that sodium chlorid has a much weaker action than free hydrochloric acid. In other words, it is a statement which is true of acids in general, as has long been well known. As a matter of fact the figures given by Brunton and quoted so confidently in the above-mentioned paper, have been shown by Dr. Dakin to be entirely erroneous and misleading, as I shall show in detail in a forthcoming publication.

Here it must suffice to state that the claim that peptic digestion is easily arrested by benzoic acid in the proportion of 1 to 200 is entirely erroneous. Peptic digestion may proceed actively under suitable conditions in a solution completely saturated with benzoic acid, although naturally here the velocity of the action is diminished. One-tenth of 1 per cent. of benzoic acid retards peptic digestion about 12 per cent. When the circulation of free hydrochloric acid is low the effect is still less. One-tenth of 1 per cent. of benzoate of soda has no marked effect on tryptic digestion of casein. Seven-tenths of 1 per cent. of benzoate of soda has about 10 per cent. retardation.

These figures are true for human trypsin as well as for that of animals. It is thus evident that no important effects on peptic or tryptic digestion are exerted *in vitro* by the above mentioned concentrations.

II

Dr. Lucas' paper contains the statement that "sodium benzoate in proportions equal to about 1 per cent. was found to be a poor preservative of neutral or weakly acid media." It is true that sodium benzoate is not a powerful preservative, but the statement just quoted is highly misleading for the reason that most bacteria in media neutral to litmus (e. g. sugar bouillon) are very much retarded in their growth or wholly inhibited by percentages of sodium benzoate ranging from 0.2 per cent. to 0.5 per cent. For example, Professor Theobald Smith of Harvard University found that the growth of typhoid bacilli was greatly retarded by 0.3 per cent. of sodium benzoate and completely inhibited by 0.5 per cent.

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[1] Lucas, Daniel R.: Some Effects of Sodium Benzoate, The Journal A. M. A., March 5, 1910, liv, 759

III

The statement is made that "benzoic acid, liberated from sodium benzoate by strongly acid fruits or vegetables and taken in them, even in small amounts, into an empty stomach, is sufficiently irritating to cause gastro-intestinal disturbances as well as systemic symptoms." It is, of course, obvious that acids, when liberated from their salts by other acids, are more apt to act as irritants than when these acids are neutralized by bases. And naturally benzoic acid is no exception to the general rule.

The assertion that injurious effects are obtained on the digestive tract and on other parts of the body is based on conditions very foreign to anything that happens in the course of any sane habit of diet. Large quantities of acid fruit-juices were employed in these experiments. In the second place, these acid materials were taken on an empty stomach. In the third place, the concentrations and the amounts of benzoic acid taken were far in excess of any quantities that would be consumed by persons in a normal state of mind and with a normal appetite. There is one possible exception to the latter statement and that is in the case of cider, which a person sometimes so gormandizes as to consume several liters of cider in the course of a few hours. Even here it is hardly conceivable that more than 2 or 3 gm. of free benzoic acid would be ingested.

IV

The character of the expedients employed to show the detrimental action of sodium benzoate is well shown in the pointless experiments on dogs, which were fed enormous doses of sodium benzoate from which the acid was liberated by means of hydrochloric acid and citric acid. Among others, the following is reported: A fasting dog weighing 3.5 kilos received sodium benzoate and hydrochloric acid in a preliminary experiment. The day after recovery from muscular weakness, nausea, etc., it received four gm. of sodium benzoate in an amount of hydrochloric acid theoretically sufficient to decompose it completely to free benzoic acid, together with 100 c.c. of a 2 per cent. citric acid solution. The animal became very weak, developed convulsions and died soon after the dose, showing congestion, ulceration and hemorrhage, etc. in the digestive tract, liver and lungs.

Anyone who will reflect on what this experiment represents in the way of benzoic acid in a human being will see that it is equivalent to giving 80 gm. of benzoate of soda to a man weighing 70 kilos. The effect in such an experiment is to liberate benzoic acid in its most concentrated form, to say nothing of free solid benzoic acid. How any other outcome than gross damage to the digestive tract was to be expected it is difficult to see, the results obtained being merely in accord with what every pharmacologist knows to be the action of strong acids. The fact that dogs receiving hydrochloric acid and citric acid in considerable quantities without benzoic acid did not become sick and die presents no unexpected features. It is doubtful if any competent, fairminded investigator, or anybody gifted with a sense of humor would put forward such an infelicitous experiment as the one quoted above as an argument in regard to the action of benzoic acid as a food preservative.

V

Among the claims made in regard to the injurious action of benzoic acid is the one that the presence of benzoic acid in acid fruits and fruit-juices gives rise to albuminuria, sometimes associated with nephritis. Experiments made in my laboratory with the administration of several grams of free benzoic acid daily in apple-butter or cider, failed to show the presence of albuminuria. In one of our subjects a faint trace of albumin was found from time to time during the experiments and also at other times. A careful expert examination with the cystoscope showed a slightly tender spot in the posterior urethra. No casts or evidence of renal irritation were found. Similar experiments with large quantities of benzoic acid in acid media have been made by various colleagues, including Professor Long,[2] without any of the results described in Dr. Lucas' paper.

The circumstance that the blood possesses an abundance of alkali with which to neutralize free benzoic acid, even in doses far above those obtainable in preservatives, explains why this acid, ingested in moderate amounts, can give rise to no injury of the kidneys, since the salts of benzoic acid, like the salts of most ordinary acids, are without injurious effects on the kidneys. It is necessary for those who are responsible for the claim that benzoic acid is the cause of albuminuria to give the exact methods by which the presence of albumin was ascertained—a precaution which is omitted in the published results. In this connection it should be recalled that benzoic acid was formerly used freely in bladder disease in large doses without any evidence that it was injurious to the kidneys.

VI

The tables in the paper under discussion give the impression that when benzoate of soda is ingested it is followed by the appearance of reducing substances in the urine attributable to the benzoic acid. Unfortunately the author has committed the flagrant error of making no adequate controls based on the action of cider alone. I wish to state that unbenzoated cider, 2 liters in the course of the day, in many persons gives rise to a marked increase in the reducing substance of the urine. For this reason it is wholly unfair on the strength of the data given to implicate benzoic acid in the causation of the reducing action noted. There is not the slightest evidence that this is the case. On the contrary, a series of experiments by Dr. Wakeman, made with scientific accuracy, showed that the action of benzoated cider was exactly paralleled by the action of unbenzoated cider. An accurate comparison of the varying reducing power of the urine with Fehling's solution can be excessive must suggest an injurious action of which definite volumes of Fehling's solution and of urine of definite specific gravity are employed and boiled for the same length of time, the results being recorded after a definite lapse of time. These essential precautions have been wholly neglected in the paper under consideration.

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[2] Professor Long reports the results of experiments on three men who drank strongly acid lemonade containing benzoate, through a period of five days. The average acidity of the lemonade was 0.14 normal (equivalent to 8.4 grams of acetic acid per liter), and the amounts consumed were as follows, in the mean: Subject 1, daily, 700 c.c. of lemonade with 2.6 gm. of benzoate; subject 2, 700 c.c. of lemonade with 2.9 gm. of benzoate; subject 3, 600 c.c. of lemonade with 2.4 gm. of benzoate. The highest amounts of benzoate taken daily were 3.75, 5.00 and 5.00 grams respectively. Careful tests of the urine through the five days of the experiment, and for several days subsequently, failed to show the presence of even traces of albumin, or of reducing substances acting on Fehling's solution. No abnormal behavior of any kind was observed.

It is well known that large doses of benzoate of soda (10 to 20 gm. daily) cause the appearance of increased reduction in the urine due to the glycuronic acid. Somewhat smaller doses may sometimes suffice to do this. The relatively small quantities taken in benzoated cider do not suffice to produce this effect. The reducing substance present after taking very large doses of sodium benzoate has nothing whatever to do with the appearance of sugar in the urine and this point should be clearly understood.

VII

One other instance may be mentioned of the incorrect statements in which this paper abounds. The statement is made that after taking benzoated cider "excessive amounts of hippuric acid were eliminated." It is not clear what is meant by excessive amounts of hippuric acid, but the implication that the amounts observed were excessive must suggest an injurious action of which there is, of course, no evidence whatever. That this implication is clearly the intent, in the paper under consideration, is shown by the coupling of the above statement with the information that the urine was reduced in amount.

Not the remotest evidence exists that the excretion of hippuric acid, even in very large amounts, ever causes any damage to the kidneys. On the contrary, the evidence is all in the other direction. The paper quoted leaves us entirely in the dark as to what constitutes an excessive amount of hippuric acid and it surely would be no easy matter to give any rational meaning to such an expression.

If it were worth while to cite further examples of the untrue statements with which this paper abounds it would be an easy undertaking. But I think that enough has been said to show the unreliable and biased nature of Dr. Lucas' publication; and it may safely be left to the fair-minded reader to put a valuation on the conclusions of the paper in question.

819 Madison Avenue.

PANCREATITIS FROM THE STANDPOINT OF THE CLINICAL SURGEON

A. J. OCHSNER, B.S., F.R.M.S., M.D.
Surgeon-in-Chief, Augustana Hospital and St. Mary's Hospital; Professor of Clinical Surgery in the Medical Department of the University of Illinois
CHICAGO

Since the surgeon has come to consider pancreatitis habitually with the same uniform system that he considers all other important intra-abdominal pathologic conditions, our appreciation of its importance as well as our knowledge of this condition have acquired reasonable dimensions.

ETIOLOGY

In 1895 my attention was directed to the practical side of the subject during a visit to Mayo Robson's clinic in Leeds, but it was only after his enthusiastic presentation[1] before the International Congress in Paris in 1900 that I really awoke to an appreciation of the value of his observations. Undoubtedly, the infection usually travels up the common duct into the gall-bladder where there is a possibility for the accumulation of a large quantity of infected bile mixed with mucus, which on its way down the common duct is easily diverted into the pancreatic duct if there is obstruction owing to the presence of gall-stones or of edema below the point at which the duct of Wirsung empties into the common duct.

In my cases the irritation of the common duct has been due quite as often to the passage of infected sandy bile as to the presence of gall-stones.

There is much difference in the statistics of various authors regarding the relative frequency with which pancreatitis accompanies gall-stones. This is probably due to the fact that the diagnosis of pancreatitis is based on the impression the surgeon obtains from palpating the gland during operation, and one surgeon may consider the gland practically normal in an individual instance in which the same condition would impress another surgeon as representing a certain degree of enlargement.

Unless a surgeon has examined many cases in which the abdomen was opened for conditions which could have no relation with the condition of the pancreas in order to become familiar with the feeling of a normal pancreas it is not likely that his judgment in this matter can be entirely satisfactory.

It is therefore well to palpate the pancreas in cases of operation for the removal of uterine fibroids or ovarian cysts and other similar conditions. This can be done readily while the surgeon's hand is in the upper portion of the abdomen for the purpose of examining the gall-bladder.

All surgeons with large experience in this especial direction seem to agree that pancreatitis patients almost invariably suffer from disease of the gall-bladder or ducts and that gall-stones in the common duct are more commonly accompanied with pancreatitis than stones in the gall-bladder (Robson,[2] Mayo,[3] Moynihan,[4] Egdahl,[5] Opie.[6])

It has been suggested by Williams and Bush,[7] and apparently confirmed by careful experimentation, that anatomic peculiarities interfering with the free drainage of pancreatic juice through the ducts of Santorini or Wirsung provide favorable conditions for the infection of the pancreas. It is plain that when the natural conditions for free drainage of pancreatic juice are unfavorable, complete obstruction, due to the presence of gall-stones or edema, is much more likely to occur.

The colon bacillus is the most common cause of the infection, and this is frequently associated with the streptococcus and the staphylcoccus, according to the investigations of Egdahl[5] and others.

Pancreatitis, in common with all inflammatory diseases of the gall-bladder and ducts, frequently follows the inflammatory diseases of the gastro-intestinal tract.

After the pancreas has once been infected a species of vicious circle is developed from the fact that the swollen pancreas obstructs the portion of the common duct which passes through the head of this organ, and this favors the development of septic micro-organisms above this point as well as their further backing up into the pancreas. It is for this reason that the free drainage due to cholecystostomy has given such uniformly favorable results.

PATHOLOGY

All these facts seem to bear out the theory commonly accepted at the present time that, barring the rare occurrence of metastatic infection, pancreatitis is due to infection from the alimentary canal, usually through the biliary passages, or, according to Maugaret, more especially through the lymphatic system of these passages. The acute violent cases of hemorrhagic pancreatitis are apparently due to retrograde injection of the pancreas with infected bile and pancreatic juice which, according to Flexner, must be in a relatively concentrated form.

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[1] Robson-Mayo: Tr. Internat. Med. Cong., Paris, 1900.

[2] Robson-Mayo: Lancet, London, 1900, Vol. ii.

[3] Mayo, W. H.: Pancreatitis Resulting from Gall-Stone Disease, THE JOURNAL A. M. A., April 11, 1908, l, 1161.

[4] Moynihan: Keen's Surgery, Vol. iii.

[5] Egdahl: Jour. Surg. Gynec. and Obst., 1907, iv, 599.

[6] Opie: Diseases of the Pancreas, 1903.

[7] Williams and Bush: Tr. Assn. Am. Phys., 1907, p. 304.

In these cases which take a violent acute course there is commonly a rapid destruction of the gland parenchyma.

In the chronic forms, on the other hand, the inflammation results in interlobular fibrous tissue hyperplasia. The secreting cells of the acini are more readily destroyed than the islands of Langerhans. This fact would account for the relative infrequency of glycosuria in mild or early cases of pancreatitis.

DIAGNOSIS

Until recently the diagnosis of pancreatitis was made incidentally only during the progress of operations on the gall-bladder or biliary tracts and the stomach. Since the attention of the surgeons was generally directed to this condition by Mayo Robson,[1] Riedel,[9] Mayo and others, the diagnosis has frequently been made before and confirmed during the operation. From this it has become possible to associate the condition of pancreatitis with a number of more or less typical diagnostic signs observed before operation.

In 1904 Cammidge,[10] in connection with the clinical work of Mayo Robson, brought out a most ingenious chemical test which promised to be of great value in the diagnosis of this condition.

The method has been described most clearly by Schroeder,[11] as follows:

> Forty c.c. of the urine, filtered, acid reaction, free from albumin and sugar, are boiled with 2 c.c. of strong hydrochloric acid for ten minutes. After partly cooling, 8.0 gm. of lead carbonate are gradually added. When the reaction is complete, the mixture is chilled, filtered and the excess of lead in solution removed by addition of 2 gm. of sodium sulphate bringing the mixture to a boil, chilling and filtering to 20 c.c. To this filtrate is now added a mixture of phenylhydrazin hydrochlorate 0.80 gm., sodium acetate 2.0 gm. and of 50 per cent. glacial acetic acid 1 c.c. and the whole is boiled on a sand-bath for ten minutes. The solution is then filtered while hot and set aside to crystallize. The precipitation of crystals, sometimes only in microscopic quantities, of the characteristic formation of ozazones, makes a positive reaction.

In 1905 I had a large number of tests made at the Augustana Hospital laboratory on patients who were later operated on so that the findings could be judged as to their reliability by the actual examination of the pancreas. These tests were carried out by Dr. J. L. Yates, then my chief assistant, whose large experience as a carefully trained laboratory investigator fitted him particularly for this task. He had, moreover, assisted me in the diagnosis, operation and after-treatment of a great number of cases belonging to this special group, so that he also possessed a large experience as clinical surgeon.

These tests were extremely fascinating, but it seemed to us that it required too much of the personal element of the observer to make the method useful except in the hands of unusually skilful experts.

The fact that surgeons like Robson and Moynihan continue to trust this test is, however, sufficiently important to convince me that it contains real merit.

SYMPTOMS

If we add to the well-known symptoms of cholecystitis an area of tenderness from 5 to 10 cm. long located to the right of the umbilicus over the middle of the right rectus abdominis muscle in cases in which we can exclude a diagnosis of duodenal ulcer we have the typical symptoms on which to make a diagnosis of pancreatitis.

In duodenal ulcers there are two symptoms usually present which are not symptoms of pancreatitis: (1) pain before meals when the stomach is empty and (2) hyperchlorhydria with eructation.

In pancreatitis there is frequently referred pain to the mid-scapular or left scapular regions. In gastric ulcer the same pain is commonly present, but with this there is pain on deep pressure at a point half-way between the ensiform appendix of the sternum and the umbilicus.

There are, of course, cases in which two or more or all of these conditions are present in the same patient and other cases in which it is possible only to determine the fact that one or more of these conditions are present, while a strict differential diagnosis may not be possible. In these cases, however, it is quite possible to determine the necessity of an exploratory incision, and, when the indications for this are not clear, then it is usually safe to keep the patient under dietetic treatment until further study of the case has cleared up the diagnosis.

Solomon[13] has pointed out the fact that in the presence of pancreatitis von Noorden's oatmeal diet gives rise to typical butter stools and that an abnormally large amount of lecithin is excreted. From 0.4 to 1.2 gm. is excreted in twenty-four hours when these patients are placed on an egg diet, while normal individuals excrete not to exceed 0.1 gm. under similar feeding.

According to Schlecht[14], Mueller's test is quite reliable. The patient is given a test meal which is followed after two hours by a calomel purge. A few drops of the stool are sterilized by heat, then placed on an agar plate containing Loeffer's serum. The plates are kept in an oven at 131 to 141 F. for twenty-four hours. If trypsin is present the serum shows pronounced depressions, if absent the surface is smooth. Lepine[15] has made most interesting but very complicated experiments which he claims are valuable in the diagnosis of this condition.

In advanced cases there is usually marked emaciation frequently with peculiar circumscribed areas of fat in roll-like masses on the front and sides of the chest and abdomen. There is usually marked anemia present, often approaching chlorosis with degeneration of the erythrocytes. Many of these patients suffer from obstinate constipation while others have equally troublesome diarrhea.

Sugar is present in only a small proportion of these cases.

TREATMENT OF CHRONIC PANCREATITIS

The treatment must consist primarily in relieving the irritation due to the backing up of infected bile by establishing free drainage which must be sufficiently permanent to permit complete restoration of gall-bladder and ducts as well as the pancreatic ducts. It is important to keep the intestines and stomach normal and free from irritation permanently by the use of proper diet and hygiene after these operations.

In case gall-stones or pancreas stones are present, these must be removed, whatever their location may be. In rare cases in which the common duct is permanently obstructed, cholecystenterostomy may be indicated.

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[9] Riedel: Berl. klin. Wchnschr., January, 1896.
[10] Cammidge: Lancet, London, 1904, i, 776.
[11] Schroeder: Surgery, Gynec. and Obst., December, 1908.
[13] Solomon: Wien. klin. Wchnschr., April 2, 1908, No. 14, p. 453.
[14] Schlecht: München. med. Wchnschr., lv, No. 14, p. 713.
[15] Lepine: Rev. méd., No. 14, xxviii, p. 157.

It is probably best to make the anastomosis between the gall-bladder and duodenum where possible and between the gall-bladder and jejunum through an opening in the transverse mesocolon where the duodenum cannot be safely reached. The suture method should be employed similar to the one employed in posterior gastroenterostomy.

ACUTE PANCREATITIS

It is difficult to make a differential diagnosis in acute pancreatitis with any degree of certainty because there are several other violent acute conditions which are so similar in their symptoms that they can probably never be positively excluded. The conditions most likely to be confounded are (1) perforation of the posterior wall of the pyloric end of the stomach; (2) perforation or gangrene of the gall-bladder or duodenum.

Cases of severe acute pancreatitis have been diagnosed as acute intestinal obstruction, renal colic, ectopic gestation and, of course, appendicitis and gall-stone colic.

In acute pancreatitis the pain is extremely severe in the right upper quadrant of the abdomen. There is intense shock; nausea and vomiting are usually present and the patient gives the impression of being at the verge of destruction. The abdominal muscles are tense, although Moynihan[4] found this symptom absent in some of his cases. There is usually a steady rise of the pulse from the onset.

In these cases there is usually a history pointing to gall-stone colic in previous milder attacks (Fitz[16]).

If a tumor be felt there is usually tympanitis on percussion over this surface because the gland is located behind the duodenum (Elliott[17]).

Cyanosis has been observed by Opie and others. Sugar is present in the urine in some cases. Egdahl[5] gives a careful review of 107 cases in his study of the symptoms and diagnosis of acute pancreatitis which is well worth the careful consideration of the clinician.

SURGICAL TREATMENT OF CHRONIC PANCREATITIS

In chronic pancreatitis the treatment originally practiced and advised by Mayo Robson, consisting in the establishment of perfect drainage through a cholecystostomy opening, seems to be still the best. The edema of the common duct and the pressure and consequent obstruction due to the presence of an enlarged pancreas are thus relieved and with this the pancreas and the liver are simultaneously reduced to a normal size.

The portion of the gland that has been hopelessly destroyed is, of course, permanently lost, but the remaining portions are usually sufficient to perform the necessary physiologic functions if the patient is properly educated in the selection of food.

SURGICAL TREATMENT OF ACUTE PANCREATITIS

In mild cases of acute pancreatitis surgical treatment is not indicated. If the local irritation is removed by making gastric lavage and placing the patient on exclusively rectal alimentation so that nothing passes through the duodenum for a time the obstruction to drainage through the common duct will soon subside because of the disappearance of the local edema and then the conditions will be favorable for recovery from acute pancreatitis.

The correctness of this view must be plain to every one who has operated on a large number of patients suffering from acute gall-stone impaction in the common and cystic ducts at various periods during these attacks.

If an operation is performed during the attack the simple drainage of the gall-bladder has always, in my experience, sufficed to relieve the condition except in cases in which there existed at the same time a severe acute cholangeitis in which there has been a mortality of about 30 per cent. A moderate degree of cholangeitis will subside even if there is marked acute pancreatitis, provided the operation itself does not increase the infection.

It should be as simple as possible and no rough or unnecessary handling of the inflamed tissues should be employed.

Even in violent acute cases of pancreatitis a proportion of patients will recover if the abdomen is quickly opened and simple drainage is introduced. Glass tubes covered with gauze, split rubber tubes or cigarette drains may be employed. The number of recoveries depends on the severity of the attack and the promptness with which drainage is supplied. Robson has had nearly 40 per cent. of recoveries. Patients in whom the extravasation of pancreatic juice has caused fat necrosis are least likely to recover. I have seen several of these patients that have recovered without and one with operation and Mayo[18] reports similar results.

Unless jaundice is present it is best to limit the operation to the location and drainage of circumscribed areas of infection or necrosis of the pancreas, to the control of hemorrhage by means of fine catgut sutures and the free drainage of the entire area. This can best be done through a median or a high right rectus incision. It is *important to go over the gland carefully, but it is* quite as important not to traumatize the tissues unnecessarily. These patients have but a slight margin of possibility to recover and this can easily be lost by unnecessary traumatism or prolonged exposure.

If jaundice is present simple drainage of the gall-bladder with removal of loose gall-stones is indicated, but it is best not to interfere with stones impacted in the ducts. I have lost two patients needlessly before appreciating the folly of doing too much in these cases.

In a general way the following conclusions seem proper:

1. A clinical diagnosis of chronic pancreatitis is usually possible before operation.
2. This condition is practically always a complication of gall-bladder or gall-duct disease, except when following metastic infection.
3. It is usually curable by relieving the pathologic condition of the gall-bladder and ducts.
4. An operative diagnosis of acute pancreatitis can often be made.
5. Early operation greatly improves the prognosis.
6. It is important to reduce to a minimum the trauma in these cases.
7. The important factor in the treatment consists in the establishment of free drainage.

Importance of Tuberculides for Diagnosis of Tuberculosis in Infants.—*J. S. Leopole* found typical *papulo-squamous* tuberculides in 40 per cent. of 30 cases of tuberculosis in children less than a year old. In 5 of the cases they were the only sign of the disease and were thus a premonitory symptom of tuberculosis; in 2 cases they were the only means by which the tuberculosis was differentiated from syphilis. The arms, the lower part of the back and the back of the legs are the most frequent seat of the lesions; in *only* a few cases was there more than one. Such lesions are generally overlooked. He never found these typical lesions on children free from tuberculosis, and the tuberculin reaction or the later course of the disease confirmed their tuberculous nature. His article issues from Finkelstein's service at Berlin, and is published in the *Zeitschrift f. ärztliche Fortbildung*, Feb. 15, 1910.

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16. Fitz: Middleton, Goldsmith Lecture, 1889.
17. Elliott: International Text-Book of Surgery, p. 468.

NEWER METHODS OF DEMONSTRATING THE TREPONEMA PALLIDUM WITH ESPECIAL REFERENCE TO THE INDIA-INK METHOD*

FRASER B. GURD, B.A., M.D.
NEW ORLEANS

Since Schaudinn demonstrated the presence in syphilitic lesions of a spirillum which he called *Spirochæta pallida,* afterward changing the name to *Treponema pallidum* because the name *Spirochæta pallida* had already been given to another organism, numerous observers have attempted to utilize various methods in the hope of rendering the demonstration of the organisms more easy. Schaudinn made use of Giemsa's azur eosin polychrome mixture by which the organism is demonstrated as a pale slightly reddish-blue spiral. The various modifications of the Jenner or Romanowski stain have shown themselves of value, especially those of Leishman and Wright. The shortening, too, of the time necessary for the staining by Giemsa's method have increased the usefulness of this procedure although, perhaps, a less satisfactory stain results than when the original stain is used.

The identification of the organism, however, by all of these methods is far from easy and decidedly tiring to the eyes. Levaditi's method of demonstrating the organisms by the deposition of silver has proved itself invaluable, especially for the demonstration of the treponema in the tissues. Levaditi's method is, however, lengthy and not well adapted to general use by the practitioner of medicine.

The perfecting of the "dark-field" condenser has been a great boon to those of necessity examining numbers of specimens for diagnostic purposes. But what will probably prove to be the most valuable procedure to the practitioner at large on account of its simplicity, the cheapness of the materials used and the comparative ease of finding the organisms in the microscopic field, is that known as the "India-ink method."

I shall refer first to the "India-ink method" and later speak of the special advantage of the dark-field illumination in recognizing the differential characteristics of the spirochete. In 1909 Burri in his monograph drew attention to the fact that bacteria were not stained by India ink and that as a result the presence of micro-organisms in a thin layer of ink could be recognized by the presence of clear areas in a dark field. He advocated especially the addition of ink to growing cultures of organisms in order to watch cell division. Hech and Wilenko[1] in July, 1909, published the observation that the *Treponema pallidum* along with other micro-organisms, rendered itself easy of identification by this method.

The technic of the method is simplicity itself. As in procuring material for staining by any method the superficial necrotic layer, if it be an ulcerating surface, or the superficial epithelium, if the lesion be covered by epidermis, is scraped off and the serum which exudes is removed by means of a curette or scalpel. The fluid thus obtained is placed on a slide and an equal quantity of ink added. The ordinary commercial India inks may be used, Günther's being particularly good, although the results with Higgins' waterproof ink are good enough. The serum and the ink are then rapidly and thoroughly mixed and smeared over the slide so that a pale brown color results. The material dries in a minute or slightly more and is immediately ready for examination on placing the oil for immersion directly on the ink smear.

The picture produced will show the red blood-cells as large clear circular areas in a brownish-black field, the bacteria and débris present appearing as white rods and dots and spirochetes, if present, as clear white spirals. Hecht describes the appearance as being similar to that produced by dropping pieces of glass rods into a mixture of melted dark-colored agar in a Petri dish and holding it up to the light when cold. This description though somewhat clumsy, is sufficiently exact to give an idea of the general impression.

It is particularly important in using this method that in so far as possible serum alone be used and that a minimal amount of mucous material or fibrin be mixed with the ink. The presence of mucus results in its taking up a large amount of the color material of the ink, with the result that a smear of the requisite color and thickness cannot be made. If too much serum is used the albuminous material appears to precipitate the stain from the fluid and a finely granular appearance is seen microscopically, which is practically worthless for diagnostic purposes. Again, if too much ink is used the surface of the smear is increased in size to such an extent that the task of examining it thoroughly is greatly lengthened.

Regarding the reliability of this method perhaps it is not yet possible to speak definitely. It would appear, however, from my own results that here we have a method by which a definite diagnosis of syphilis is made possible in as great a number of cases as by any other microscopic method. A series of cases have been examined making use of this method and using Giemsa's and Wright's stains as controls. In every case in which either of the staining methods revealed the organisms the India-ink has demonstrated these in as large numbers and with a smaller expenditure of labor and time. True, the characteristic staining reaction of Giemsa's method is not present, but this loss is more than compensated for by the distinctness with which the morphology may be studied.

Practically only two or, perhaps, four organisms are apparently noteworthy in the differential diagnosis of the *Treponema pallidum* and in lesions elsewhere than the mouth and intestines only the *Spirochæta refringens* comes into thought. This organism, generally easy of differential diagnosis, by all methods, is particularly so when demonstrated by the ink method with its coarse body and broad curves.

In the mouth the *Spirochæta dentium,* the *Spirochæta buccalis* and the spirillum of Vincent may all be found. The presence of the latter along with the fusiform bacillus, together with the larger size and smaller number of its curves, renders confusion almost impossible. The *Spirochæta buccalis* too, with its morphology similar to that of the *S. refringens* is easily distinguished from the treponema with its short deep curve. The *Spirochæta dentium* is more liable to lead to error in diagnosis; its body is finer than the other forms mentioned and the curves shorter and placed more closely together. The body of this organism is, however, always definitely thicker than the treponema and never does one find more than five turns to the diameter of a red blood cell, nor are the extremities drawn out in the manner of the organism of syphilis.

Coles[2] notes a useful point in the diagnosis of the treponema, namely, that if the number of turns of the spiral of the *syphilitic spirochete* in the length of the diameter of a red blood cell be counted, these will be found to be from six to seven. The distance from the top of one spiral to the next is from 1 to 1.2 microns. The red blood cells measure about 7.5 in diameter so that on the average six or seven turns will be equal that of a red blood cell. The treponema varies in length from 6 to 15 microns or even more, and consequently contains from six to fourteen and sometimes twenty or more turns of the spiral. This measurement of the length of the spiral is usually possible, and is of the greatest value in identifying the treponema. The *S. dentium* rarely has more than four or occasionally five turns; the other organisms mentioned above from two to three, possibly five but never more.

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* From the Pathologic Laboratory of Tulane University.

[1] Hech and Wilenko: Wien. klin. Wchnschr., July 1, 1909, No. 26.

[2] Coles: Brit. Med. Jour., May 8, 1909.

For the absolute diagnosis, as mentioned above, the consideration of the motion of the live organism by means of the dark field is very important. Whereas the saprophytic spirilla, in addition to their different morphology, are actively motile and move across the microscopic field more or less readily, the treponema seems to lie lazily in the material in which it is suspended, swaying its body one way and then another, having at the same time a rotary motion, moving from time to time, too, a little backward or a little forward, but never changing its relative position very markedly.

We have then in the India-ink method a procedure of almost ridiculous simplicity which, if by the prolonged observations of competent workers, it is proved to be reliable, will be a means of putting the microscopic diagnosis of syphilis within the reach of all who have even a moderate knowledge of the use of the microscope.

PLUGGING NOSTRILS WITH COTTON AS PROTECTION AGAINST DISEASES CONTAGIOUS BY INHALATION

HENRY ALBERT, M.D.
IOWA CITY, IOWA

There is little doubt that the causative agents of most infectious diseases and especially those that are highly contagious enter the system by being inhaled, and invade the tissues primarily through the mucous membrane of the nose or other portions of the respiratory tract. Recent investigations have also proved that a person who has never had a certain disease may be a "carrier" of the germs of that disease otherwise than by the long recognized modes of carrying the bacteria about on hands, clothing, etc. For instance, a person exposed to diptheria may have his nasal cavity or throat infested with diphtheria bacilli even though not affected by the disease and such person may transmit the germs to another in whom the disease may develop.

The peculiar distribution of cases of epidemic cerebro-spinal meningitis and poliomyelitis, viz., the development of cases in different portions of a locality in individuals who have been in no way associated with each other, while at the same time persons directly exposed often remain unaffected—suggests, first that only a relatively small number of persons are susceptible to infection with these diseases, and, second, that the infective agent is carried about in the nasal cavity of individuals who are themselves not susceptible to the disease but in whom the germs may remain and multiply for a long time. Such indeed has been proved by bacteriologic examinations to be the case with the meningococcus. Association with a susceptible individual may cause the transmission of the disease. Inasmuch as drying readily destroys meningococci as well as other bacteria, or at least attentuates their virulence, it is much more probable that cases developing at long intervals of time may be better explained by coming from the nasal or buccal discharges of a carrier than from the clothing of a person exposed.

It would seem therefore that we should make a special effort to prevent pathogenic germs from being inhaled, both to protect ourselves from such germs and to prevent our becoming a "carrier." The efficacy of cotton as a bacterial filter is well known. That it is quite as efficacious for the nasal cavity as for a test-tube may be demonstrated by simple experiments. There would seem little reason why physicians and those nursing patients who have diseases which are contagious by inhalation should not protect themselves and others by placing a piece of cotton in their nostrils while in attendance on such patients.

221 South Lucas Street.

EXPERIMENTAL POLIOMYELITIS IN MONKEYS

SEVENTH NOTE: ACTIVE IMMUNIZATION AND PASSIVE SERUM PROTECTION*

SIMON FLEXNER, M.D., and PAUL A. LEWIS, M.D.
NEW YORK

The experimental investigations of epidemic poliomyelitis, carried out during the past several months, have added a large number of important facts to the knowledge of this disease. These facts relate to the nature of the cause of the disease, the manner of its entrance into and exit from the body, the pathogenesis of the affection, and the existence of an enduring state of resistance to reinfection following an attack of the disease.[1] In the present communication we wish to present briefly certain further results which have been obtained in the course of experiments on active and passive immunization in respect to experimental poliomyelitis in monkeys.

The virus which we are employing in our experiments was derived from Case K,[2] is in its twenty-fifth generation in monkeys, and has attained a high degree of activity. Intracerebral inoculation of even minimal quantities of a filtrate[3] (0.02 to 0.01 c.c.) prepared from the spinal cord of a recently paralyzed animal causes almost invariably the development of paralysis within six to eight days. Recovery almost never takes place. This virus may, therefore, be regarded as of maximal potency.

ACTIVE IMMUNIZATION

With this virus we have endeavored to produce active immunity in monkeys and, in certain instances, successfully. The virus has been injected subcutaneously in gradually increasing doses over a period of several months, after which the immunity has been tested by a full intracerebral injection of the filtrate. An example is given.

Macacus rhesus. Inoculated daily from Jan. 12, 1910, to Jan. 16, 1910, with 0.05 c.c. suspension M.A. virus. Rest of four days. Inoculation from January 20 to January 23 with 0.05 c.c. virus. Rest of four days. Daily inoculation for four days with 0.1 c.c. virus. Rest. Inoculation of successively 0.1 c.c., 0.5 c.c. and 1 c.c. virus. On March 23, 1910, 5 c.c. of suspension of virus given. No visible effect produced by the virus. April 2, 1910, intracerebral injection of 2 c.c. filtrate of K virus. No effect. Animal in perfect health May 9, 1910. Control animals injected with 0.01 c.c. to 0.1 c.c. filtrate became paralyzed in average period.

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* From the Laboratories of the Rockefeller Institute for Medical Research, New York.

[1] Flexner and Lewis: The Journal A. M. A., Nov. 13, 1909, liii, 1639; Dec. 4, 1909, liii, 1913; Dec. 18, 1909, liii, 2095; Jan. 1, 1910, liv, 45; April 2, 1910, liv, 1140; Jour. Exper. Med., 1910, xii, 227.

[2] Flexner and Lewis: The Journal A. M. A., 1909, liii, 1913.

[3] Flexner and Lewis: The Journal A. M. A., 1909, liii, 2095

In the earlier experiments, before the virus had attained maximum activity, a small number of monkeys failed to develop paralysis after intracerebral injections of considerable amounts of unfiltered emulsions of the spinal cord from recently paralyzed animals. When these monkeys were tested subsequently with the more active virus they became paralyzed practically without exception. The unsuccessful inoculation does not appear to have increased markedly the natural resistance to infection. On the other hand, we have met instances in which monkeys have failed to react to the glycerinated virus later resisted successfully an intracerebral injection of as much as 2 c.c. of a filtrate of maximum potency. Glycerin may, therefore, modify, after some time, the virus and render it more suitable for purposes of immunization.

PASSIVE SERUM PROTECTION

We observed early that monkeys that recovered from the paralysis, either perfectly or with residues, were insusceptible to reinoculation with the virus; in other words, they had developed an artificial immunity. The question, therefore, arose as to whether the immunity principles existed in the blood in sufficient concentration to be capable, first, of neutralizing the virus *in vitro* and next, in the body of infected monkeys. The experiments to determine the former were made with the maximal K virus of which 2 c.c. of a filtrate were mixed with 2 c.c. of the serum of recovered cases, incubated for one hour at 37 C. and then placed in the refrigerator over night. This mixture failed to cause paralysis in *Macacus rhesus* when injected intracerebrally, although the control animals succumbed in the usual period. Normal monkey serum has no such restraining action.[4]

The successful outcome of this experiment suggested that the blood of persons who had recovered from poliomyelitis contained similar immunity principles.[5] The blood serum obtained from children through the kindness of Dr. Terriberry, was used for experiments. The monkeys having received the mixtures of filtrate and serum are still well, while the control animals have succumbed. Since, however, the incubation period, in rare cases, exceeds thirty days, the conclusion that the paralysis is prevented and not merely delayed, cannot be reached until the expiration of that period.

In contradistinction to these successful experiments is the failure to produce a neutralizing serum in the horse by repeated injections of filtrate. The horse serum, when mixed with the virulent filtrate and incubated as stated above, displayed no power whatever to inhibit the action of the virus. The monkeys injected with the mixture of horse serum and virus became paralyzed in the same average period as the controls.

The second series of experiments were conducted along two lines. One set of monkeys received intracerebral injections of the filtrate in doses varying from 0.1 to 0.01 c.c. in the afternoon. The next morning the serums from the monkeys and from the horse were injected into the subdural space and these injections were repeated daily or at somewhat longer intervals. We chose this mode of procedure for several reasons: First, we desired to ascertain whether the virus, once it was established in the body, could be restrained, because, if this proved possible, the outlook for some measure of control of the spontaneous disease in human beings might become hopeful. Second, we had already determined[6] that the virus, however introduced into the body, first establishes itself in the cerebrospinal meninges where it propagates and induces cellular changes and reactions to which the paralysis, etc., are indirectly due. It seemed rational, therefore, to endeavor to bring the neutralizing serum into direct relation with the virus by intraspinal injection. Next, it has already been determined in the case of epidemic cerebrospinal meningitis[7] that the serum quickly escapes from the subdural space into the blood, and hence, that if it were desired to maintain intimate contact of a serum with the meninges, daily injections must be made. It was believed furthermore that multiplication of the injected virus had already started in the interval between inoculation and injection of the serum and the serum probably would not suffice to destroy immediately all the organisms there present. Finally, we do not possess at present any definite knowledge concerning the injurious action of the virus on other important organs than the nervous system. If such action does occur and can be prevented by an immune serum, the results would probably be equally good whether the serum gained entrance into the general blood from the meninges or subcutaneous tissue. In the other set of monkeys the intranasal mode of inoculation of the virus was employed and the serum treatment instituted immediately afterward.

Before giving, in brief, the results of these experiments, which must still be regarded as of preliminary character, it should be stated that the immune serum obtained from the monkeys, which had recovered from paralysis, had in every instance been subjected to reinforcement by subsequent inoculations, often of large doses, of active virus. Whether any reinforcement is actually accomplished is still an undecided question; but judging from analogy, it should have taken place. The point is under examination.

The indications of our experiments along these lines are (1) that if the quantity of the virus injected into the brain eighteen to twenty-four hours before the serum treatment is begun is not in excess of a given dose, the action of the virus can be prevented; (2) that the infection of the meninges from the nasal mucosa can also be prevented by the serum injections; (3) that normal monkey serum has no such restraining effect; and (4) that the horse serum is entirely without preventive action and tends rather to hasten the onset of paralysis.

April 12, 1910: *Macacus rhesus*. Intracerebral inoculation of 0.01 c.c. filtrate virus K. April 13, 1910 to April 22, daily intraspinal injection of 3 c.c. immune serum. April 27, 1910: Injected 3 c.c. immune serum; May 2, 1910, repeated injection. Animal remains perfectly well.

In the case of the intranasal inoculations, the injections of serum were made immediately after infection was made and at three-day intervals for three injections. The control and the animal treated with horse serum succumbed and the animal treated with immune serum survived.

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[4] Similar observations have been made by Römer and Joseph (München. med. Wchnschr., 1910, lvii, 568); and Levaditi and Landsteiner (Compt. rend. Soc. de biol., 1910, lxviii, 311), have reported such a neutralization experiment.

[5] Levaditi and Netter: Presse méd., 1910, xviii, 268.

[6] Flexner and Lewis: Jour. Exper. Med., 1910, xii, 227.

[7] Flexner and Jobling: Jour. Exper. Med., 1908, x, 141.

Experiments are in progress to determine whether the paralysis, after intracerebral inoculation, can be prevented by immune human serum and what the limits of the control of the experimental disease by such sera are. In considering these results and particularly their significance for human pathology, account should be taken of the fact that experimental poliomyelitis in monkeys is a far more severe and fatal disease than epidemic poliomyelitis in human beings.

In view of the fact that the virus of poliomyelitis can enter the nervous system through the abraded mucous membrane of the nose, we have tested the effects on the virus of hydrogen peroxid and some other disinfecting agents. The virus is quickly destroyed by a dilution of perhydrol containing 1 per cent. of hydrogen peroxid.

105 East Sixty-second Street.

RAPID BLOODLESS CIRCUMCISION

OF MALE AND FEMALE AND ITS TECHNIC

S. L. KISTLER, M.D.
LOS ANGELES, CAL.

Circumcision, one of our most common minor operations, is bunglingly done in many instances, notwithstanding its simplicity.

This operation, though an old one, is still interesting and means have long been sought whereby it could be more easily and quickly performed and be attended with less hemorrhage, and consequently meet with less objection on the part of parent and patient.

Many a surgeon has lost his best clients, and likewise many a good prospect has gone glimmering because of the unfortunate outcome of this little operation.

The necessity for circumcision is abundantly evidenced, and although it may be needless to state any reasons for doing this operation, nevertheless I will mention a few:

1. Reduced tendency to convulsions in infancy arising from irritable nervous system.
2. Habit of masturbation not so likely to be formed.
3. Lessened irritability of child or adult.
4. Amorosity reduced.
5. A hygienic condition promoted.
6. Venereal diseases not so readily contracted, and consequently:
7. Fewer pelvic diseases in women.
8. For impotency in old men, as has been advocated.

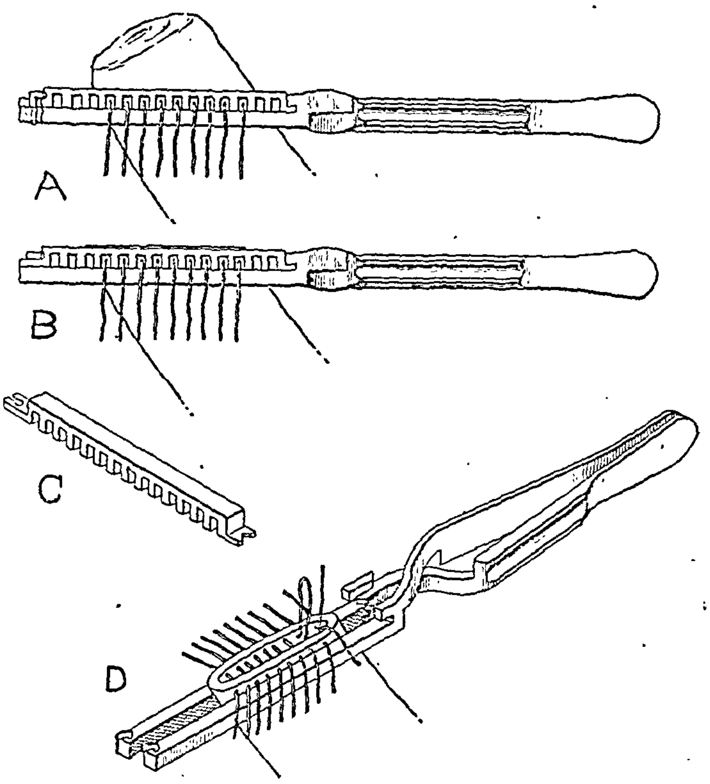
The ease with which this operation can be done by use of the instrument here described is so marked that a person could circumcize himself, provided he did not become faint-hearted. Only one-quarter of time required for other methods is needed. This operation is practically bloodless, as all ligatures are uniformly placed and tied before the clamp is removed.

The illustration shows clamp on and ligatures inserted (A); then the removal of the foreskin (B), and next, the removal of the upper sections of the blades (C), and two ligatures pulled up, one of which has been cut and is ready to be tied (D). The instrument has twelve slots or ports instead of fourteen as is shown in the illustration.

METHOD OF PROCEDURE

1. Use local or general anesthetic as deemed best.
2. Adjust clamp.
3. Insert sutures.
4. Excise foreskin with scissors or knife.
5. Remove upper section of each blade by releasing at distal extremity and lifting off.
6. Insert a ligature in anterior portion of foreskin in addition to those already inserted, if desired; also insert one posteriorly.
7. Pull each suture up singly, cut loop in center, tie each side as indicated, and having tied all ligatures, remove clamp and apply dressing.

If deemed expedient, spear the mucous membrane and draw out as desired before applying the clamp. If the foreskin adheres to glans, split on dorsal aspect to corona, break down adhesions, apply clamp and operate one side at a time, and, having no loops to pull, only skin and mucosa to unite, you can operate very rapidly. A young child may not always require stitches; however, I think it best to insert several, but each operator will use his own judgment in the matter. A better result will be obtained when the mucous membrane is cut long and the skin comparatively short, as is the case when this instrument is employed. There is practically no blood, no anxiety, no misgivings as to results, and the work is done quickly and easily. Frequently too much mucous membrane is removed and too little skin. Leave more mucous membrane and less skin and then an ideal result will be obtained.



Modified phimosis clamp, showing the manner of using it. A clamp applied, sutures placed; B, foreskin removed; C, removable section of blade; D, sutures ready to be tied.

Many females need circumcision, and the operation is more easily performed than in the male. The clamp is applied singly to such elongated or hypertrophied parts as it is desired to remove, ligatures inserted, part excised, upper part of blades removed, ligatures tied without necessity of pulling up loops, etc., clamp removed and dressing applied.

I have never tried this instrument for protruding pile tumors (of considerable length), but it occurs to me that a beautiful operation could be performed by its use, for the reason that double ligatures could be inserted through the vein posterior to the sacculated portion, and then the set of ligatures used for the vein could be withdrawn from the skin; thus the veins could be tied separately and the skin then closed with the other set of ligatures loosely tied, which would incidentally hold the vein in close contact with the skin.

Other phimosis clamps have been devised, such as those of Tortat, Levis and Skillern, but the advantage of my clamp and its distinctive feature is the notched, removable portion of the blades. This feature gives a smooth surface along which to remove the redundant tissue, leaving just the margin required to hold the stitches securely. The removal of these portions of the blades leaves the sutures free for rapid tying while the remainder of the clamp is still in place.

3146 Vermont Avenue.

HEMORRHAGE OF THE SPINAL CORD

H. W. RICE, M.D.
COLUMBIA, S. C.

Because of the rather unusual character of the injury I am constrained to report this case.

History of Injury.—In a scuffle between two women on a porch one was thrown, striking the back of her neck against the baluster rail. The rail gave way and she fell some four feet to the ground on her head. She was picked up helpless and carried to her room. A couple of hours afterward I saw her.

Examination.—Total paralysis existed below a line extending from the top of the shoulders across the chest about two inches below the clavicle. She could move her head from side to side, forward and backward movement being somewhat impaired. She could elevate the shoulders and clavicle only slightly. There was slight tenderness on pressure over the region of the fourth cervical vertebra. Otherwise the patient had no pain anywhere. No fracture or dislocation of the vertebræ could be made out, and the only surface injury was a bruise over the right frontal region. The tongue could be protruded straight. The face muscles acted symmetrically and there was no impairment of speech. The mind remained perfectly clear. The pupils reacted normally. There was no disturbance of any of the special sensations. The superficial and deep reflexes were lost in all parts of the paralyzed portion of the body. Voluntary control of the rectum and bladder was lost. The bladder emptied itself intermittently, perhaps from overdistention. The bowels remained constipated and did not respond to the strongest cathartics. Enemas served only to expel partially the gas of an extreme and persistent tympanitis. The pulse did not rise above 80, and the temperature remained under 100 F. throughout. Respiration was somewhat embarrassed at first, becoming more frequent and labored towards the last.

Diagnosis.—The lesion was decided to be hemorrhage of the cord, the approximate seat being determined by applying the principles of spinal localization as follows: The zone marking the paralyzed from the active segments of the body as indicated above was a line across the chest below the clavicle anteriorly and just above the spines of the scapulæ posteriorly. Motion and sensation existed everywhere above this line, and was lost everywhere below it. The groups of muscles represented by the sternomastoid anteriorly and the trapezius posteriorly were active as shown by the ability to move the head and neck in all directions and to slightly elevate the clavicle and shoulders. These muscles are innervated by the cervical plexus or four upper cervical nerves. The group of muscles next below represented by the deltoid, the biceps, and triceps were paralyzed as shown by the inability to move the arms or to completely raise the shoulders. These latter muscles receive their nerve-supply from the brachial plexus or four lower cervical segments of the cord, and therefore the hemorrhage must have extended as high as the zone between the cervical and brachial plexuses or as high as the fifth cervical nerve root. The spinal accessory nerve which in the main supplies the sternomastoid and trapezius muscles receives branches from the cervical nerves as low down as the third segment. Hence it was inferred that the lesion was somewhere below the third cervical nerve root. In short, the injury was probably between the third and sixth cervical nerve-roots. That the substance of the cord and not the membranes only was the seat of the hemorrhage was concluded from the following points: In hemorrhage of the membranes there would have been decided pain with a more gradual onset of paralysis; in meningeal hemorrhage we would expect to find the paralysis confined to one or more groups of muscles or involvement of one group after another until there was a complete paraplegia; in meningeal hemorrhage there is more apt to be a gradual improvement in the paralysis with possibly complete recovery; and in hemorrhage of the membranes inflammation is more likely to follow terminal meningitis.

Autopsy.—The patient died on the fourth day and the autopsy confirmed the diagnosis revealing the following conditions: There was a fracture without displacement of the tip of the spinous process of the fourth cervical vertebra, also a linear fracture of the left lamina of the fifth vertebra. A considerable amount of dark fluid blood exuded from the cervical tissues and a slight amount of extravasation was found in the dura around the fourth and fifth segments of the cord. A small amount of blood exuded from the subdural space. The central canal opposite the fourth, fifth and sixth segments contained minute blood-clots and macerated cord substance. There was a widespread ecchymosis of almost the entire cross-section of the cord at the level of these segments. The damaged section was limited between the fourth and sixth cervical nerve-roots.

The points in the case of special interest were the following:

1. The differential diagnosis between injury to the membranes and injury to the cord substance is important. In a purely meningeal hemorrhage the blood clot might be removed by a laminectomy, but if the cord substance is seriously involved surgical interference would be futile.

2. The deep reflexes below the seat of the lesion were lost while the automatic centers for the rectum and bladder remained intact; that voluntary control of the bladder and rectum was lost showing that the motor pathway from the brain to these organs was interrupted by the cervical injury.

3. The cause of death was probably paralysis of the phrenic nerve and was not immediate because not all the nerve origin was first impaired.

1316 Washington Street.

A CASE OF PELLAGRA IN ILLINOIS

J. H. BACON, M.D.
PEORIA, ILL.

As spring is the time of the year in which pellagra is most prevalent, and as all cases previously reported from Illinois have been asylum cases, the report of a case of that disease in private practice should prove of interest.

History.—I was called to see a woman, aged 37, who complained that she had been burned while taking a vaginal douche on March 30, 1910. She was a middle-aged woman, with a peculiar, dejected, staring expression, confined to her bed. Her family history was negative. She had been healthy as a child; was married; had five healthy children; had lived in Peoria last 20 years; had been constipated in childhood; always a light eater, rarely using meats. Her dietary was that of the ordinary laboring family; corn-meal mush served once a week; other corn products used frequently. She had suffered from a puerperal infection after the birth of her first child and had been in poor health since. In February, 1903, her last child lost twenty pounds in last five years. During 1905 she had a paralysis, of short duration, of the left arm and side of the face.

Present Illness.—In March, 1903, a rash appeared on the backs of both hands that persisted until the following winter. It came on as large blebs that became ulcerated at the base.

Her general health declined and menstruation disappeared entirely. Each following spring, usually in March, the eruption has reappeared, but dryer, more widespread and of a brownish-black color. These lesions have burned and itched, and sometimes have been quite painful, requiring morphin. During the eruption of 1907 a severe dysentery developed which has since persisted with from three to twelve stools a day. The eruption of 1909 covered forearms, hands, neck, feet and areas of the chest. Blebs under the eyes were lanced. The skin resembled elephant skin and frightened the children at times. The present attack began apparently after a vaginal douche when she thought she was scalded. Her mouth was sore, and the saliva hot and burning. Micturition was frequent and scalding. There were four watery stools daily. Her appetite was poor and she lost twenty pounds in last five years. During 1905 she had a paralysis, of short duration, of the left arm and side of the face.

Present Condition.—A small, emaciated woman, confined to bed, with a facial expression of despair; eyes prominent and reddened from weeping; complains of headache and loss of sleep; words are spoken slowly—in a drawl; lips large, protruding and cyanotic. The mucous membrane of the mouth is eroded in patches; the tongue is thick and the papillæ prominent; gums swollen, boggy, with pus exuding around the teeth; profuse watery discharge from nose and mouth; occasional cough; mucous expectoration; breath has foul odor. On sitting she becomes flushed and exhausted. Her feet drag and she settles to the floor on attempting to walk. There is no ataxia. The patellar reflexes are exaggerated. Babinski present. Her mental condition is clouded, memory poor and she is quite despondent. She has a chronic tuberculosis. The abdomen is tender, especially in the epigastrium. The external genitalia are excoriated; the skin is a brownish color, dry and scaly, with tendency to crack. There is no weeping. This condition is especially marked on both forearms and has well-marked outlines at wrists on flexor surface. The skin on the areas affected last year is thin and parchment-like. Urine is negative; stool is liquid, of a brown color, and foul odor. Numerous motile spirilla found. No ameba. Blood: Hemoglobin, 80 per cent.; reds, 4,000,000; leucocytes, 10,000; differential negative; no malarial parasites found.

Diagnosis.—The diagnosis seems clear, with recurring skin lesions for seven springs, improving in cold weather, the parchment-like skin, the dysentery and indigestion, the gastro-enteritis, the stomatitis, the thickened tongue, the relatively high hemoglobin, the impaired mental condition and the malnutrition.

Treatment.—The skin condition has improved under the use of an ointment containing boric acid and salicylic acid. The general condition has improved slightly with improved diet and the administration of iron, arsenic and strychnin. Headache and pain have required morphin.

333 Woolner Building.

HOOKWORM DISEASE IN KANSAS

K. B. FORD, M.D.
WICHITA, KAN.

My purpose is to call the attention of the profession in the northern states to the importance of being on the lookout for cases of hookworm disease. It is known that its natural geographical distribution is in the South and its practically complete absence in the North might cause it to be overlooked or diagnosed as one of the numerous other things, such as neurasthenia, which it so much resembles

While traveling in the southern states in September, 1909, through the courtesy of physicians in several places and at one medical meeting I had the privilege of seeing and examining several cases of hookworm disease and the adult worms, and of witnessing a microscopic demonstration of the ova. The knowledge of this disease thus acquired suggested the correct diagnosis in the following case:

History.—In April, 1910, a married woman, aged 32, consulted me, complaining of a gradual decline in strength, lack of energy and ambition and gave a list of symptoms that sounded like a treatise on the symptomatology of hookworm disease. The decline had been gradual, following a trip through the southern states and extending over a period of a couple of months. The patient did not feel ill but was tired out. She said that she had lost little, if any, weight.

Examination and Treatment.—The patient appeared to be well nourished, but had the sallow skin, the milky blue eye, and the anxious, tired, worn look of the hookworm victim. There was a patch of dermatitis on the anterior and external surfaces of the right leg, which the patient said had been there for two months. After a cathartic, and a fast, the patient was given thymol, followed by salines; the stools were examined with the assistance of Dr. Phares and the adult worms and ova were found in large numbers. The patch of dermatitis on the leg began to clear up after the first treatment. The depletion caused by the salines revealed the fact that the plump appearance of the patient was due to a general edema, which concealed a really marked emaciation.

Since having this experience I recall a patient, a young woman from Tennessee, whom I saw in August, 1909. She complained of indefinite pains, nervous symptoms, etc., no doubt due to the same cause, which was unsuspected at that time. Though these cases probably are rare in the North, it is evident from the above that the infection may exist in individuals coming from the South, or may be acquired by persons visiting that section even for a short time, and the possibility should be kept in mind.

1223 South Lawrence Avenue.

VARICELLA AS A CAUSE OF NEPHRITIS

REPORT OF TWO CASES

E. J. G. BEARDSLEY, M.D.
Chief of Outpatient Medical Department, Jefferson Medical College
PHILADELPHIA

The rarity of published accounts of nephritis complicating or following an attack of varicella indicates either that the associated conditions are infrequently encountered or that such cases are not reported by those observing them. It is well known that varicella is, in the majority of instances, a mild disease and free from serious dangers but occasionally the disease may be unusually severe or a complication or complications may lead to unfortunate results. When such complications are encountered it seems well to publish the account of the cases that others may profit.

Among the rare complications of varicella is nephritis. Henoch[1] first called the attention of the profession to this complication of the disease and published the accounts of four cases studied by him. Von Jurgensen,[2] Brunner,[3] Rille,[4] Dillon Brown,[5] Hogyes,[6] Janssen[7] and Oppenheim[8] have reported similar cases. I have had the opportunity of studying two cases which exhibited well-marked nephritis during and after an attack of varicella and in which there seemed good reasons for believing that the kidney affection was the result of the primary exanthematous disease. The following case has been previously quoted.[9]

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1. Henoch: Berl. klin. Wchnschr., Jan. 14, 1884, No. 2.
2. Von Jurgensen: *Quoted* in Nothnagel's Specielle Pathologie und Therapie, 1896, iv, 294.
3. Brunner: Quoted by Brown in Twentieth Century Practice, xiv, 197.
4. Rille: Deutsch. med. Wchnschr., 1891, xvii, 301.
5. Brown, Dillon: Twentieth Century Practice, xiv, 197.
6. Hogyes: Jahrb. f. Kinderh., new series, xxiii, 337.
7. Janssen: Berl. klin. Wchnschr., 1887, xxiv.
8. Oppenheim: Berl. klin. Wchnschr., Dec. 26, 1887.
9. Hare and Beardsley: Typhoid Fever and the Exanthemata. Edition 2, 381.

CASE 1.—*History.*—The patient was an Italian girl, aged 6. The parents stated that, with the exception of a slight attack of bronchitis when 2 years of age, their daughter had never been sick. The illness began two days before the patient was seen by me. The child seemed "feverish" and complained of headache. During the evening of the day the symptoms appeared the mother discovered the skin eruption, which she described as being "warts with water in them." Two days following the appearance of the eruption the family noticed that the patient "was not right in her head" and sent to the dispensary for a physician.

Examination.—There were forty or fifty varicellous lesions scattered well over the chest, abdomen and back, with a few on the extremities. The temperature was 103.2 F. and the pulse 150. The lungs were resonant on percussion and the breath-sounds, although exaggerated, revealed no further abnormality. The patient was slightly delirious, the breath foul and the tongue thickly coated. The mother stated, on inquiry, that the child had not urinated for eighteen hours and that at the time the last urine was passed it resembled blood. The patient was placed in a hot pack, which soon relieved the delirium, and was later thoroughly purged. The first urine passed was not collected, but a specimen obtained a few hours later was very highly colored, and contained 1.2 gm. of albumin (Esbach's test) and large numbers of coarsely granular casts, many finely granular, a few hyaline casts and a considerable number of red blood cells; specific gravity 1026.

Course of Disease.—The day following the first urine examination the child was still slightly delirious and the urinary changes were much the same as before but a larger amount of urine was passed (10 ounces were collected). The casts remained in evidence for six days, after which time they gradually disappeared. The albumin persisted in the urine for two weeks, and then disappeared. Following this illness the child's urine was examined once a week because of her extreme pallor, but no abnormality was discovered for some time. Some six weeks after the initial illness the child was brought to the dispensary to be treated for "stomach trouble." The mother stated that since the illness there was evidence of a "weak stomach" while previously the child could eat any food with impunity. The pallor associated with the history of nausea and occasional attacks in which the patient vomited prompted me to examine her urine again. At this time there was found 0.5 gm. of albumin to the liter with many finely granular and few hyaline casts. This case was studied about one year ago and during the past year I have seen the child four or five times at intervals of several months for what the mother terms "stomach trouble." At each examination of the urine the nephritic condition has been evident. As long as the child is bathed and the diet supervised she remains in fairly good health, but if the vigilance of the inspecting nurse is relaxed and the family becomes careless, the child soon develops toxemic symptoms.

CASE 2.—*History.*—The patient was a colored boy, aged 5. The attack of varicella differed from that in the first case mentioned, in being much more severe, many of the lesions showing petechial hemorrhages. This child was taken suddenly ill with a slight convulsion and later vomited freely.

Examinations.—When the child was seen the skin was well spotted with vesicles. The temperature was 103 and the pulse 140. The lungs were clear but the throat was much inflamed. Two days after the rash first appeared many of the vesicles showed hemorrhagic tendencies and the child appeared stuporous. After considerable difficulty a specimen of urine was obtained but not until several days after the child had greatly improved under eliminative treatment. The urine was highly albuminous and contained granular, hyalo-granular and hyaline casts in large numbers. Two weeks later there was no albumin present in the urine but a few hyaline casts were found.

Course of Disease.—The urine was examined again six weeks after the initial illness and no abnormality found, but three months later the child developed a frank lobar pneumonia, became very toxemic and an examination of the urine presented the picture of an acute toxic nephritis. Three weeks after convalescence from the pneumonia, casts and albumin were still present in the urine.

From these cases and from the cases quoted from the literature it appears that the kidney structure may be seriously affected by varicella and the necessity of frequent urine examinations during and following even mild attacks of the disease is realized.

2030 Chestnut Street.

A DEATH UNDER ANESTHESIA DUE TO STATUS LYMPHATICUS

ERNEST B. BRADLEY, M.D.
LEXINGTON, KY.

Patient.—A boy, aged 7, with the following history: Whooping-cough with good recovery at the age of 2 years. No other diseases of childhood. Operation for enlarged tonsils and adenoids, by Dr. J. A. Stucky, three months previously. At this time patient took the anesthetic fairly well except for a slight accumulation of mucus in the throat which, however, was not particularly troublesome. There was no history of any kind of asthma, any difficulty there had been in breathing being entirely relieved by the removal of the adenoids.

Present Illness.—For the past three years the glands on the left side of the neck had been noticeably enlarged. They had increased in size rather markedly in the last few months, although their growth had not been uniform from the beginning. Dr. S. B. Marks, who had charge of the case, said that six months previously these glands seemed to become smaller, but on the whole they had grown, until at the time of examination they showed as a marked swelling from the mastoid process to the border of the first rib. At times there had been some temperature disturbance but as this usually disappeared promptly under a dose of calomel, it was supposed that it was due to intestinal ailments. The physical examination showed no other glands palpable; the chest and abdomen were apparently normal. The probable diagnosis of tuberculous glands was made by Dr. Marks, and this was concurred in by Dr. A. H. Barkley, to whom the case was referred for operation. On March 15 the author was asked by Dr. Barkley to administer the anesthetic at the operation for the removal of these glands.

Operation and Anesthesia.—As the child was crying and fighting, chloroform was used to begin; it took only a few whiffs to quiet him. Ether was then substituted and was used exclusively from this time on. Dr. Barkley removed the enlarged glands easily and practically without the loss of a teaspoonful of blood. The patient behaved well under the anesthetic, the only untoward symptom being that too much mucus would accumulate in the throat. This was never excessive, however, and on withdrawal of the anesthetic it disappeared. The pupils were at no time dilated and while never down to the pin-point, often seen, were always well contracted. After the anesthesia had continued for an hour and a quarter, when the surgeon had almost finished the operation, the mucus in the throat becoming somewhat troublesome, the patient was allowed to come out so that he might swallow. The cone was removed for about three minutes, when the winking reflex becoming very active, a few drops of ether were poured on the cone and this placed over his face. He took two or three gasps without getting any air into his lungs. The surgeon was informed and artificial respiration immediately resorted to. The sphincter ani was divulsed, the heart massaged by Dr. Marks, who was assisting, the throat cleansed of mucus, and the tongue pulled forward rhythmically. The heart could not be felt to beat and the pupils from being contracted dilated to full size. The patient's color was good and not the least cyanotic, showing that the heart and respiration must have ceased almost simultaneously. The efforts at artificial respiration were abandoned after fifteen minutes, during which time the patient was not induced to take a single breath.

Permission for complete autopsy could not be obtained but we were allowed to remove the thymus, which was found to occupy its usual position behind the sternum. It showed two lobes with a centrally placed isthmus and measured 5 cm. long by 4 cm. wide by 1 cm. thick. It weighed 9 gm. The fifty or more lymph-nodes taken from the neck had a total weight of 92 gm. They ranged from the size of a small pea to that of a small English walnut. On section they were firm and showed no softening.

Pathologic Report.—Sections of the thymus and of two of the larger lymph-nodes were sent to Dr. Aldred Scott Warthin, of Ann Arbor, who reported as follows: "As far as I can make out from the slide of thymus, it does not show any special change beyond that of a general hyperplasia. The lymph-nodes are extremely hyperplastic, and may be taken as representing the early stages of a lymphatic struma. There is no tuberculosis in the ones sent, and I think that the diagnosis of status lymphaticus is justified by the sections. There is certainly a marked lymphoid hyperplasia. The preservation of the germ centers in the lymph-glands rules out lymphosarcoma, and the condition is more typical of status lymphaticus than of Hodgkin's disease, though I believe that there is no hard and fixed line between some of the cases of Hodgkin's and those showing the clinical appearance of lymphatic struma."

146 Market Street.

RARE FETAL MONSTROSITY

ENTIRE ABSENCE OF ABDOMINAL PARIETES; TALIPES CALCANEOVARUS; SPINA BIFIDA

HARRY ARANOW, M.D.
Adjunct Gynecologist, Lebanon Hospital; Assistant Gynecologist, Presbyterian Hospital Dispensary
NEW YORK

While a number of cases of celosoma are reported in medical literature, I could find only one case in which the entire abdominal parietes were wanting.[1]

History.—Family history was negative; the mother was a primipara. I was called at about 2 a. m., Dec. 2, 1908. The patient had been in actual labor for about six hours and had passed a clot about five hours previously. Pains were occurring every five minutes. The abdomen was symmetrically enlarged. The fetal back was to right; the fetal extremities occupied upper left quadrant. The anterior shoulder was near middle line, and the fetal head was in the pelvis. Fetal heart sounds were heard in the right lower quadrant—142. The cervix was fully dilated. Position was R. O. A. I ruptured the membranes before removing the examining hand from the vagina. About 3 a. m., the head appeared at the vulva. Soon after, in the interval of pains, there were repeated gushes of blood from the vagina. I suspected a premature detachment of placenta but as the labor was progressing satisfactorily and the patient seemed in perfect condition, I did not interfere. After delivery of the head there was considerable delay in the birth of the shoulders. The hemorrhage continuing, I assisted the delivery of shoulders with fingers in the axilla. Even after the delivery of the shoulders, however, the body seemed to recede and to remain stationary. Slight traction brought fetus and placenta *en masse.*

Description of Child.—The head, neck and arms, pelvis, thighs and legs were perfectly formed. Both ankles were in position of talipes calcaneovarus. There was a small meningocele at the base of the sacrum. The abdominal parietes were entirely wanting and were replaced by a thin, transparent serous membrane. This membrane was continuous with both skin and parietal peritoneum at the costal and pelvic margins and along the outer border of the muscles of the back. This membrane also lined the inner surface (fetal) of the placenta and extended over the three blood-vessels near the center of the placenta. The umbilical arteries, the umbilical vein, the liver, gall bladder, stomach, intestines and upper part of bladder were plainly visible. With the exception of a low position of the transverse colon, an apparent shortening of the colon, a positive shortening and thickening of the omentum, all abdominal and pelvic (female) organs seemed to be normal. The child cried lustily but gradually grew weaker and died after about half an hour.

185 East Seventy-first street.

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[1] Ramsay: Northwest Med. Jour., 1857, new series, vi., 450.

Therapeutics

HOW AND WHEN SHALL DRUGS BE ADMINISTERED?

This is a question of vital importance, as even if the diagnosis is correct, the indication for a drug positive, and the selection of the drug needed accurate, all is of no avail if the drug is administered in an insoluble preparation, at a wrong time to accomplish the object aimed at, or in a frequency that is either useless on the one hand or dangerous on the other. To be more explicit, it lacks physiologic and therapeutic sense to administer a drug, that is quickly absorbed and quickly eliminated, when a continuous action is desired, so infrequently that there is only momentary, intermittent effect. On the other hand, it is futile to administer a drug for immediate need that requires hours to act. It is certainly physiologically wrong to administer a drug frequently that requires hours, or even a day or two to be excreted.

The greatest number of mistakes in medication are made in the treatment of inflammations and diseases of the stomach, and in disturbances of the digestion. If simple gastritis is diagnosed, and it is decided to treat it with bismuth, how futile to expect that a few grains given immediately before meals (or, we are sorry to say, often immediately after meals) could do any good in ameliorating the irritation of the stomach mucous membrane. For bismuth to aid in healing this membrane, it must be spread well over it when the stomach is empty. Also, it is well to wash off the mucus which must of necessity form on any inflamed mucous membrane. Bismuth for this purpose should be given an hour before a meal, in a dose of 2.0 or 3.0 grams (30 or 45 grains), taken with a not too large amount of water, and such administration should be preceded a half hour before by a large draught of hot water, with or without a little salt, and perhaps a small amount of bicarbonate of sodium to wash off the mucus and prepare the membrane for the bismuth treatment. Such treatment once a day, combined with a diet regulated to cause the least irritation and the proper treatment of coincident constipation, will rapidly heal simple gastritis. This same treatment is a valuable aid in healing an ulcer of the stomach.

If it is deemed advisable to administer nitrate of silver, how useless, in the first place, to order it in such a form that it will be oxidized before it is taken by the patient, and how useless to give it after a meal. Also, what lack of good sense is displayed when a nitrate of silver treatment is given two or three times a day. How many would touch a canker sore, or other surface inflammation, with nitrate of silver three times a day, or twice a day, or even once a day? A nitrate of silver treatment for ulcer of the stomach or duodenum may be tried once a day, or once in two days, for a few days, but never for any length of time, and then it is best to have the dose of nitrate of silver combined with some inert earth, in capsule, and the capsule uncapped at the moment of swallowing and taken into the empty stomach with a suitable amount of hot water. This will insure, as near as it is possible, an application of the nitrate of silver to the ulcer.

The value of digestants as generally administered is open to much question. A small amount of pepsin, given after an ordinary meal, is probably of but little value. The value of dilute hydrochloric acid after meals, when the stomach needs it, is proved, and frequently when pepsin is administered it is combined with hydrochloric acid, and it is likely that the hydrochloric acid does the work. A combination of pepsin with bicarbonate of sodium, as often seen, is of course absurd. The coincident administration of pancreatin and pepsin seems unworthy of serious consideration. The pancreatin will not act in acid media, and its activity will doubtless be entirely destroyed before it reaches the intestine. Sometimes it may be advisable to administer bicarbonate of sodium before meals. At this time it may do two things. It may cause the contents of the stomach to be alkaline or neutral longer than without it, thus aiding the starch digestion due to the saliva. If, however, it is in the stomach many minutes before the meal, it would probably quickly stimulate an outpouring of hydrochloric acid to neutralize it. After meals it would doubtless prolong the starch digestion, and temporarily, at least, inhibit the protein digestion. For heart burn or pyrosis occurring several hours after a meal the bicarbonate of sodium is certainly valuable symptomatic treatment to counteract the hyperacidity. Such acidity, however, is often due to lactic acid and not to hydrochloric acid. Such treatment is purely symptomatic, and the repeated administration of soda is inadvisable, and the cause of the condition should be removed if possible.

A large number of drugs, especially alkaloids, even bitters, and alcoholic preparations in any amount, will inhibit the digestion more or less. In ordinary doses, however, the inhibition is probably but slight, and any drug or preparation that is irritant to the stomach should certainly be administered either directly, or within an hour, after meals. Even bland, non-irritating tablets, pills, and capsules should generally be administered after a meal, or at least with a large draught of water, and the tablets should be crushed before swallowing. Potassium chlorate tablets should not be dissolved in the mouth, as the concentrated saliva containing this solution when swallowed, is irritant to the stomach and may cause inflammation and even ulceration. Certainly such tablets should never be swallowed into the stomach, and there is no logical or rational reason for ever administering potassium chlorate internally. Bromid tablets, salicylic acid or its salts in tablets, tablets containing ammonium chlorid, and in fact most tablets may cause irritation of the part of the mucous membrane on which they dissolve, if swallowed into the empty stomach, and most of the above-named tablets should be predissolved, or certainly crushed before taking into the stomach at any time. Quinin pills or tablets should never be taken on an empty stomach. If in any dose other than a small tonic one, quinin will slow peptic digestion. Consequently, if large doses are administered, it is well to give them between meals, swallowed with a few ounces, more or less, of milk or other simple, easily digestible food. If a patient does not sleep well, or does not get to sleep readily at night, the possibility of a tonic capsule or pill of quinin, or quinin and strychnin, or strychnin, given after the evening meal being the cause of it should be considered, and the evening dose omitted. Also, many a patient is given hypnotics for insomnia, when the omission of the evening tea or coffee will allow normal sleep. It is physiologically wrong to give a hypnotic to a patient who is ill when he is being hyperstimulated by strychnin throughout the afternoon and evening.

For medication of the bowels with bismuth, large doses, or perhaps better, frequent doses, are always needed, as doses unless very large, given at long distances apart, are likely to pass along with the food and not medicate the bowel mucous membrane at all. It is useless to expect that bismuth administered by the mouth will heal or medicate the mucous membrane of the colon.

If morphin must be administered and the patient is taking nutriment, if possible, it should not be given within one or two hours after a meal, as the digestion will certainly be inhibited.

When cathartics are necessary, it is generally well understood which act rapidly and which slowly, which are to be given at bedtime or better even, often at suppertime for action the next morning, and which given before breakfast for immediate action. However, many combinations are made which combine quickly acting cathartics with slowly acting cathartics. Such combinations are certainly a mistake. Aloin, cascara, podophyllin, euonymus, sulphur, calomel, and rhubarb all generally act slowly, taking anywhere from 6 to 12 hours. The salines and the drastic cathartics generally act in from 2 to 4 hours. Senna may act in from 4 to 6 hours. Of course the size of the dose has a great deal to do with the rapidity of action, but the above is approximate.

It has been supposed for some time that the experiments were conclusive that saline purgatives acted by the fact that they were very slowly absorbed and caused an exudate of water into the intestine so that the fluid in the intestines and the fluid in the blood vessels would become isotonic, and that this mechanical fact, *viz.*, the water with increased peristalsis, was the cause of the large watery stools from salines. Clinically, it has also been noted that salines act better when the patient is up and about than when he is in bed and at rest. This has again seemed to prove that gravity had a great deal to do with the rapidity of the saline catharsis. Lately, however, Dr. Arthur F. Hertz, Assistant Physician at Guy's Hospital, London (*Guy's Hospital Reports*, Vol. LXIII) has shown, by administering bismuth preparations at various periods of digestion and taking *x*-ray pictures of the abdomen at different periods of digestion, that salines are really absorbed from the stomach and upper bowel and probably re-excreted into the lower intestine. Hertz, in cooperation with F. Cook and E. G. Schlesinger, has shown that when food is taken into the stomach it reaches the cecum in about four hours. A saline aperient, on the other hand, may cause an action of the bowels in some instances in even half an hour, and often within two hours. Insoluble bismuth being administered with a meal will show, by radiographs, the exact length of time in which food passes down through the different parts of the intestine. A seidlitz powder or its equivalent, taken at the time of the bismuth, or with the bismuth and food, and then radiographs taken, shows that the movement of the bowels comes long before the bismuth and food reach the cecum and colon. The excess of water excreted, therefore, with such movements cannot come from the small intestine, as otherwise it would wash the meal and the bismuth down with it, but really must be excreted into the lower gut. Saline purgatives also seem to cause no increased acceleration of the passage of the food from the stomach to the cecum. These investigations seem to show clinically that when it is desired to empty the colon and not act on the small intestine, salines are indicated, but when it is desired to cause stimulation for excretion or for increased peristalsis or for drainage of the upper intestine, other cathartics than salines are indicated.

Dr. William Brady, of Elmira, N. Y. (*New York Medical Journal,* Jan. 29, 1910) writes a most instructive article on the administration of drugs. He emphasizes the necessity of knowing the length of time before a drug is absorbed and about the length of time in which it will be eliminated.

Probably in no branch of medicinal therapeutics are more mistakes made than in the treatment of cardiac and circulatory weakness. Brady shows how really futile it is to expect active aid from digitalis in any acute heart weakness, and yet digitalin is constantly used hypodermatically for this purpose. Much of the digitalin on the market is unreliable, and while it is less irritant when used hypodermatically than the liquid preparations of digitalis, it has not been proved that it is any more effectual as a cardiac tonic than a sufficient dose of a liquid preparation of the whole drug. If the cardiac drugs are separated into cardiac stimulants and cardiac tonics (the stimulants acting quickly, but such action not lasting any length of time; the tonics acting slowly, but projecting their activities for a considerable length of time) one will not make mistakes in their use. The cardiac stimulants are, ammonia, camphor, strychnin, atropin, suprarenal and pituitary preparations properly used, and in some instances where only a quickly acting and not lasting stimulation is required, alcohol. The cardiac and circulatory tonics are, digitalis, strophanthus, caffein, and ergot used hypodermatically. Caffein and strychnin are really stimulotonics, both acting rather quickly and having their effects last a considerable length of time. In certain conditions when the heart is failing and the blood-pressure high, nitroglycerin and nitrites will relieve the heart and improve the whole character of the circulation. While nitrites act quickly and such action is theoretically and laboratorily quickly over, if given three or four times a day they will positively project, in most instances, a lowering of the blood pressure over the whole twenty-four hours.

Brady repudiates the so-called Da Costa (nitroglycerin compound) tablet containing digitalis, strophanthus, belladonna, and nitroglycerin, as combining drugs which act quickly with those which act slowly. His criticism is just. At the same time, the nitroglycerin of the second and third dose will doubtless prevent some of the vasomotor contraction of the first dose of digitalis. Consequently, the combined treatment, whether given in one tablet or in separate preparations, is often not bad therapy. Theoretically and practically a little more careful discrimination of the needs of each patient will develop a method of drug administration that will be satisfactory and yet will not require such combination, *viz.,* if the patient needs nitroglycerin, he probably does not need digitalis. On the other hand, if he needs digitalis, and it is inadvisable to contract the blood vessels, a small dose of digitalis may give satisfactory action, and nitroglycerin will not be needed.

Brady emphasizes the well-known but often disregarded fact that oils inhibit digestion by diminishing the secretion of hydrochloric acid. Consequently, if it is advisable to give a patient olive oil or cod-liver oil (and, as urged by Brady, pure, clean cod-liver oil acts just as well and often better than any emulsion), theoretically it should be given two hours after a meal, at about the time when the stomach will completely evacuate its contents into the duodenum. This is theory, and perhaps physiologically correct. Practically, it is very disagreeable for a patient to take oil two hours after meals, even if he were so daily situated as to be able to do so. Also, the contents of the stomach do not all pour, at one stated time, into the duodenum, but more or less frequently during the process of gastric digestion certain amounts are passed into the duodenum, and the oil might be passed into the intestine long before the gastric digestion was completed.

Brady states that hexamethylenamina is eliminated into the cerebrospinal fluid in one-half hour after its administration, and this, he states, in sufficient amount to inhibit staphylococcus growth. So far as we know, hexamethylenamina is harmless when administered in any ordinary amounts for most any length of time; consequently, the drug seems indicated whenever meningitis is present or is likely to develop. This drug is also eliminated and acts satisfactorily in inflammations of the gall-bladder and in inflammations of the urinary tract, especially of the pelvis of the kidney. It would seem advisable to administer it in typhoid fever to prevent localizations of the typhoid bacillus in parts of the body other than the intestine.

As Brady emphasizes, it should not be forgotten that the iodids are absorbed rapidly and are eliminated rapidly, unless they have been given for a long time, when it may take several days for the excess of iodid to be completely eliminated. Bromids, on the other hand, are absorbed rather slowly and are eliminated very slowly, and if taken for a long time, may not be completely eliminated for weeks.

Phenolphthalein is very slowly absorbed and acts very slowly and is best given as a tablet which should be thoroughly masticated before swallowing. Sometimes this drug, even in small doses, causes a great deal of irritation of the bowels.

Thyroid Treatment of Regularly Intermittent Joint Effusions.—P. Ribierre gives a historical sketch of regularly intermittent joint effusions, the syndrome, differentiation, etc., and reports a typical case in which analysis of the attacks, their periodical recurrence and the general condition suggested that the thyroid functioning might be at fault. The subsidence of the attacks during pregnancy and various other features of the disease sustain the assumption of defective glandular functioning as the main factor in the etiology, he is convinced. His patient was a woman of 34; under thyroid treatment the general condition improved, the periodicity and severity of the joint affection were materially modified and finally the attacks ceased entirely. Nearly two years have elapsed to date since the last attack. Before the thyroid treatment was commenced they had recurred every ten days for nearly two years, affecting both knees. The thyroid treatment was given at intervals from October, 1905, to March, 1908. The details of the case and of treatment are given in the *Bulletin de la Soc. Méd. des Hôp. de Paris,* 1910, xxvii, 96.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1545)

CHINOSOL.—Normal Oxychinolin Sulphate.—Chinosol is a normal oxychinolin sulphate $(C_9H_7ON)_2H_2SO_4$.

Chinosol is a yellow crystalline powder of saffron-like odor and burning taste. It melts at from 175° to 177.5° C. (347° to 351.5° F.). It dissolves readily in water but with difficulty in alcohol and it is insoluble in ether. The aqueous solution has an acid reaction.

A drop of solution of ferric chloride produces in a solution of chinosol a marked green coloration. Barium chloride produces a white precipitate. Solutions of alkaline hydroxides precipitate from an aqueous solution of chinosol a white precipitate, consisting of interlaced crystalline needles, which after filtration, washing and careful drying in a desiccator should melt at from 73° to 75° C. On incineration chinosol should not leave a weighable residue.

Actions and Uses.—So far as experimental evidence goes, chinosol is nontoxic. It is a powerful antiseptic equal in this respect to mercuric chloride and considerably stronger than phenol. It exerts an antiseptic action in solutions containing 1 part to 5,000. It is a feeble germicide being weaker than phenol and much weaker than mercuric chloride.

Dosage.—For internal use 0.3 Gm. (5 grains) three times daily. As an antiseptic the average strength of solution is 1 to 1,000; as a nasal or vaginal douche, it is best given with 1 part to 5,000, and as an eye-wash 1 to 8,000, gradually increasing the strength of the solution according to the sensitiveness of the patient.

Manufactured by Franz Fritzsche & Co., Hamburg, Germany (Chinosol Co., Parmele Pharmacal Co., New York). U. S. patent No. 906,918. U. S. trademark No. 28,750.

DIGIPURATUM.—Digipuratum is a purified extract of digitalis, said to contain about 0.4 per cent. of digitoxin and 4 per cent. of digitalin in the form of a tannate. It is standardized biologically by the method of Gottlieb. It is claimed that 85 per cent. of the inactive substances found in the ordinary extract have been removed and that it is free from digitonin and other gastric irritants.

Digipuratum is a greenish yellow, odorless powder of bitter taste. The active constituents of digipuratum are insoluble in cold water and diluted acids, but are easily soluble in weak alkalies.

Digipuratum responds to the following identity test: If 0.1 Gm. digipuratum is underlaid with about 3. Cc. of glacial acetic acid which contains 1 per cent. of a 5 per cent. solution of ferric sulphate, there appears a red band (presence of digitalin) and above this another, at first bright green, later changing to dark green and finally blue (presence of digitoxin).

To determine the digitoxin content, 10 Gm. of digipuratum are dissolved with moderate heat in 50 Cc. of water; 5 Cc. of 10 per cent. ammonia water are added and the liquid is then extracted with chloroform. The chloroformic extractions are filtered into a tared vessel and the chloroform removed by distillation. The residue is dissolved in 3 Gm. of chloroform and mixed with 7 Gm. of ether and 50 Gm. of petroleum ether. The separated flakes are collected on a small filter. Then the residue on the filter is dissolved in absolute alcohol, allowing the solution to run into the tared distilling vessel. The alcohol is then distillated off and the residue dried to constant weight. The digitoxin thus found should not amount to more than 0.04 Gm.

The physiologic activity is determined by the method of Gottlieb: 1 Gm. of digipuratum is dissolved with heating in 19 Cc. of water and 1 Cc. of a 2 per cent. solution of sodium bicarbonate. If now 0.15 Cc., 0.2 Cc., and 0.25 Cc., respectively, of this solution is injected into the femoral lymphatics of freshly caught land frogs (rana temporaria), weighing 30 Gm. each, the exposed heart of the animals should permanently be brought to a stop in the majority of instances (say in five out of six experiments) within half an hour after the administration of a 0.2 Cc. dose. If 0.2 Cc. of the 5 per cent. solution=0.01 Gm. of digipuratum, is sufficient to stop the systolic heart-beat within half an hour, then 1 Gm. of digipuratum will contain 100 units; should 0.25 Cc. of the 5 per cent. solution be necessary, the number of units of digipuratum it contains would be 80; if 0.25 Cc. should not yet prove sufficient, the preparation would be too weak to be effective; and should the systole be arrested after a dose of 0.15 Cc. within half an hour after injection, the preparation would be too strong.

The total physiologic activity having been determined, the relative amount that is due to digitoxin can be determined by using the digitoxin separated in the above quantitative determination and by the difference between this amount and the total physiologic activity the amount due to the digitalin alone can be estimated.

Actions and Uses.—The same as digitalis, but it is claimed that it is less liable to disturb the stomach and on account of its exact dosage cumulative effects can be more easily avoided than with other preparations of digitalis.

Dosage.—The same as digitalis.

Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York. U. S. patent No. 943,578. U. S. trademark No. 73,012.

Digipuratum Tablets, 1 1-2 grains.—Each tablet is said to contain digipuratum 0.1 Gm. (1 1/2 grains).

SECACORNIN.—Ergotin Roche.—Secacornin is a solution of the active principles of ergot in a menstruum consisting of distilled water, glycerin and 7.5 per cent. of alcohol. 1 Cc. of secacornin corresponds to 4 Gm. of ergot U. S. P. and is said to be standardized according to the method of Kehrer (Arch. f. exp. path. u. Pharm., vol. lviii).

Secacornin is prepared from ergot by removing fat by means of benzin or similar solvent and exhausting by percolation with diluted alcohol. The total percolate is then deprived of its alcohol by distillation in vacuo. The resinous mass which separates after cooling is then carefully drained off and the clear filtrate having been evaporated to the consistency of an extract is mixed with the general vehicle.

Secacornin is a dark brown solution, said to be sterile. It is claimed that it does not deteriorate on keeping.

Secacornin responds to the following identity test: 1.6 Cc. secacornin is mixed with 3.0 Cc. distilled water, and 5 drops of 10 per cent. ammonia water, and shaken out in a separatory funnel with 20.0 Cc. of ether. After complete separation of the two liquids, the aqueous solution is allowed to flow off, the remaining ether washed with 2.0 Cc. distilled water, and the wash-water likewise carefully separated. After this the ethereal solution is filtered into an Erlenmeyer flask, and traces of water removed by the use of as much anhydrous sodium sulphate as can be held on the point of a knife. Following this it is filtered into a small glass dish and cautiously evaporated.

The residue is then dissolved in from 1 to 1½ Cc. ferric chloride-acetic acid (1 drop of Liq. ferri chloridi with 200 Cc. acetic acid). To this solution is added with a pipette, cautiously and without mixing, in order to form an understratum, 3.0 Cc. pure concentrated sulphuric acid. At the point of contact of the two liquids a characteristic blue to violet ring forms after a time.

Action and Uses.—The same as ergot.

Dosage.—0.5 Cc. (8 minims) are equivalent to 2 Cc. (30 minims) of fluid extract of ergot U. S. P. It may be given by intramuscular injection in doses of 0.5 to 1 Cc. (8 to 15 minims).

Manufactured by F. Hoffmann-LaRoche & Co., Basel, Switzerland (The Hoffmann-LaRoche Chemical Works, New York). Not patented. U. S. trademark No. 58,830.

DESICCATED THYMUS—Armour.—Desiccated Thymus—Armour, consists of the fresh thymus gland of the calf freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A very light yellow powder, having a peculiar odor. Partly soluble in water.

One part represents approximately 5 parts of the fresh thymus gland. It is rich in nucleoprotein and in lymphoid tissue. Upon incineration, it should yield not more than 12 per cent. ash.

Actions and Uses.—See Thymus Gland (N. N. R., 1910, 144).

Dosage.—0.13 to 0.25 Gm. (2 to 4 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

Thymus Tablets-Armour.—Each tablet contains desiccated thymus 0.065 Gm. (1 grain).

Dose.—2 to 4 tablets three times a day.

(To be continued)

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[*For other information see second page following reading matter*]

SATURDAY, MAY 28, 1910

THE MEIOSTAGMIN REACTION

Immunity reactions are constantly gaining a wider field of usefulness as diagnostic aids, and as new facts are discovered, exact diagnosis will doubtless be a matter of comparative simplicity in a great number of diseases in which one has to rely now on more or less equivocal signs, at least in the atypical or mild forms of disease.

Recently, Ascoli[1] has discovered a new phase of immunity reactions, which is physiochemical in nature and consists in a determination of the surface tension of an immune serum plus its specific antigen before and after incubation at 37 C. for two hours. He employs the stalagmometer of J. Traube for measuring the surface tension; by means of it, one can determine exactly the number of drops in a given quantity of fluid. Since after incubation he finds a lowering of the surface tension and a consequent decrease in the size of the drops (as will be shown later), Ascoli designates the test the "meiostagmin" reaction, from Greek words meaning "small" and "drop."

The first disease investigated was typhoid fever. From patients suffering with the disease, serums were obtained which agglutinated typhoid bacilli in dilutions ranging from a strength of 1 to 80 to that of 1 to 360. For the antigen, an alcoholic extract of typhoid bacilli was prepared, according to the method of M. Neisser and Shiga.[2] The serum was employed in a dilution of 1 to 10, the antigen in dilutions of 1 to 1,000, 1 to 10,000, 1 to 100,000 and 1 to 1,000,000; 0.85 per cent. sodium chlorid solution was always used as the diluent. To 9 c.c. of the diluted serum 1 c.c. of diluted antigen was added, and the number of drops in the mixture was immediately determined. The fluid was incubated for two hours and, after being allowed to cool to room temperature, the number of drops was again determined. When antigen, in dilutions ranging from a strength of 1 to 1,000 to that of 1 to 100,000, was used, a lowering of the surface tension was always found, as shown by the increase in the number of drops by two to three. This constituted a positive reaction. Ascoli found that normal serums, used as controls, when united with typhoid antigen and incubated, showed no decrease in the size of the drops. Similarly, negative result was obtained with typhoid serums when an alcoholic extract of colon bacilli was substituted for the typhoid antigen.

Izar,[3] a pupil of Ascoli, extended the study of the meiostagmin reaction to twelve luetic serums with very interesting results. The antigen was prepared from the spleen of a syphilitic fetus. The serum was diluted with physiologic salt solution, the proportions varying from 1 to 20 to 1 to 100, the antigen being diluted 1 to 100 in all experiments. The two were united in the proportions employed by Ascoli with typhoid. Of the luetic serums tested, eleven gave a positive Wassermann reaction, while with the meiostagmin reaction all were positive, the increase in the number of drops varying between two and five.

For control, other antigens were prepared from material showing tuberculosis, carcinoma, sarcoma, echinococcus and typhoid. All were negative with the luetic serums; the number of drops was never increased more than one. As a further control, serums from patients suffering from a number of diseases other than syphilis were tested with syphilitic antigen. The most interesting of these were two serums obtained from leprous individuals, both of which gave a positive Wassermann reaction. They were sent to Izar with the statement that they yielded a positive Wassermann reaction, and it was only after a negative meiostagmin reaction was obtained that he learned that the patients were leprous and not luetic. The positive reactions, then, included the twelve patients known to be luetic, all controls being negative.

Finally, Ascoli and Izar[4] have sought to apply the meiostagmin reaction to the diagnosis of malignant neoplasms. Preliminary to their observations on human material, they examined the serums of normal and sarcomatous rats; positive reactions were obtained in all of nine sarcomatous animals, while eight normal controls were negative. After obtaining these results, human serums were tested against sarcomatous rat antigen and, in the later cases, against carcinomatous human antigen. (Ascoli and Izar give the preparation of the antigen in detail.) Their material included sixty-two patients suffering with malignant tumors, both carcinomas and sarcomas, a majority of the diagnoses being confirmed by histologic examination of tissue. Of these patients, fifty-eight gave a positive meiostagmin reaction; forty-eight patients suffering with other diseases (including two with lipomas and two with leukemia) all reacted negatively.

Ascoli and Izar are cautious in their conclusions. The results thus far obtained make it appear that the meiostagmin reaction is specific and that its field of application may be extensive. The great simplicity of the technic as compared with that of the Wassermann reaction should bring the method into almost immediate general use. if the results prove to be dependable. It remains, however, for further observations to demonstrate to what extent the reaction may be relied on as an aid to diagnosis.

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1. Ascoli: München med. Wchnschr., 1910, lvii, 62.
2. Neisser and Shiga: Deutsch. med. Wchnschr., 1905.
3. Izar: München. med. Wchnschr., 1910, lvii, 182.
4. Ascoli and Izar. München. med. Wchnschr., 1910, lvii, 403.

THE CHINOSOL REPORT

The report by the Council on Pharmacy and Chemistry, which appears elsewhere[1] in this issue, is of more than ordinary interest. The preparation with which the report deals—Chinosol—was originally advertised as a most remarkable antiseptic and germicide free from the dangers of poisoning. These claims were so important that an investigation of the product was undertaken by the Council, the results of which were published as a report in THE JOURNAL Jan. 25, 1908. This investigation verified the statement that Chinosol is a good antiseptic, but it showed, on the other hand, that the germicidal action of the product is vastly inferior to that which was claimed for it. In its report, the Council accepted the conclusions of Weyl—since proven erroneous—that Chinosol has toxic properties and it pointed out that the chemical composition, as given by the American agents, had repeatedly been shown to be false and could be so demonstrated by a very simple analysis.

The American agents, the Parmele Pharmacal Co., having challenged not only the conclusions of the report but also some of the facts, the Council ordered a complete reinvestigation of the disputed points, by an independent bacteriologist, as well as by its original referee. This has extended over two years, and in the meantime additional confirmatory evidence has been obtained by eminent and independent investigators in England and Germany. The conclusions which the Council has drawn from its second investigation are presented in the present report. In brief, it is shown that the work of the original referee and the conclusions based directly on this work, were correct in every particular, but that the Council made a mistake in accepting Weyl's conclusions as to the toxicity of the product.

Regarding the false statements in the advertisements dealing with the composition of the product, the agents have since explained that they quoted *verbatim* from the United States Dispensatory, and that they did not know that any controversy had arisen as to the chemical composition. As to the matter of toxicity, the headline in the Council's original report, "Not free from danger of poisoning," went beyond the evidence. The Council had not itself investigated this point and was misled by a definite quotation. The experiments which the Council has since conducted have failed to bring out any evidence that Chinosol is harmful. While this, being negative evidence, is not conclusive proof that the product is absolutely harmless it must be conceded that so far as our present knowledge goes, there is no ground for challenging the claim of safety. Public safety and professional responsibility require that claims of absolute freedom from danger shall be supported by incontrovertible and unassailable evidence. The Council takes the attitude that in such cases a large number of negative observations are practically invalidated by a single, well-authenticated positive observation—an attitude which is unimpeachable in principle.

The most important findings of the Council, however, relate to the antiseptic and germicidal action of the preparation. Regarding the antiseptic value there has been no dispute. As to the other point, however, the Council confirmed its first report, that Chinosol is practically valueless as a germicide. This conclusion—and it was really the main issue of the first report—has been abundantly confirmed by independent investigators both at home and abroad, and in regard to it there can be no doubt. The experimental results on which the agents for Chinosol based claims, having been shown conclusively to be vitiated and invalidated by the want of proper experimental precautions. In extenuation, however, it should be said that the company was led into its serious error by a mistake of its technical advisers, a mistake which could be discovered only by experts.

The distinction between germicide or disinfectant and antiseptic or preservative is sometimes lost sight of and yet the difference is a vital one. A substance that is excellent for inhibiting the growth of bacteria (antiseptic) might be valueless as a killer of bacteria (germicide). It is evident, therefore, that to rely on the claims that were previously made for germicidal power would be extremely dangerous, and might more than offset any good that might follow the legitimate use of the article in its proper field as an antiseptic. The physician and surgeon must know exactly the limitations of such a remedy in both directions.

The report illustrates once again the need of independent and critical investigation of all proprietary remedies. It is necessary, not only to prevent fraud, but also to discover false claims made in perfect good faith and on apparently good authority. These last are, in some ways, the most dangerous: A manufacturer who was sincere in his false convictions would be likely to employ his superior material resources in such a way that an isolated independent investigator would scarcely obtain a hearing. It is doubtful whether such claims could be challenged successfully, except by an independent but official organization, possessed of the resources of the Council. The incident also illustrates the pains which the Council takes to get at the truth of disputed points. It shows too, that a manufacturer who has any legitimate grievance against the Council, may be assured that his representations will be considered fairly and without prejudice.

A NEW COMBINATION AGAINST THE AMERICAN MEDICAL ASSOCIATION

Within the past few days the newspapers of the chief cities of the country have carried large advertisements headed: "Do You Want the 'Doctors' Trust' to be able to Force its Opinions on You?" These advertisements paint in vivid colors—"yellow" predominating—the disaster and general destruction that will follow the formation of a federal department of health. They emanate from, or to be more correct, are signed by, an organization calling itself the "National League for

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[1] Pharmacology department, page 1801.

"Medical Freedom." In addition to the regular display advertisements, the press agent is supplying matter for the reading pages, and there is every evidence that the propaganda is not lacking financial support. Of course the American Medical Association is the *bête noir* the "league" seeks to kill; it is the "medical trust" referred to. Members of the Association will be surprised to learn that if a national department of health is created it will result in "denying to the people the right to determine for themselves the kind of medical treatment they shall employ." For this reason, and so far as the advertisements *state*, for *this* reason only, the National League for Medical Freedom has been brought into being. As a slogan under which the real reasons for organizing may be carefully concealed, it may serve its purpose. Most people prefer to have their thinking done for them and this alone will prevent the absurdity of such a proposition, as that on which the "league" is ostensibly founded, becoming apparent. Yet every person with the most elemental knowledge of our government knows that the regulation of the practice of medicine and the licensing of physicians is a function of the state and that any law attempting to confer such power on a department of the federal government would be unconstitutional. The proposed department of health would have just as much authority to determine what "kind of medical treatment" the people should employ as the Department of Agriculture has to dictate to the farmer regarding the implement company he shall buy his plows of. Yet, we are asked to believe, apparently, that a national department of health would mean that the free-born American citizen who wanted to have a purulent appendix cured by the "spinal adjustment" route, would have to patronize a surgeon, even though he were a "conscientious objector" to surgery. It would mean, it seems, that the individual suffering from malaria who wished to be freed from this "moral error" by "absent treatment" would be ignominiously dragged to the internist and dosed with quinin. It would mean that the optimist who would cure his rheumatism by wearing a "guaranteed magnetic ring," would have to endure the administration of the salicylates. It would mean—but why pursue these harrowing predictions further?

Seriously, though, there must be something wrong with the mental make-up of the individuals composing this "league" who expect—even by such potent means as the lavish distribution of printers' ink—to persuade a reasonably sane people that any law might, could or would be enacted that would curtail the rights of the public as they have suggested. Of course, the fact is that the moving spirits behind the organization of the "league" have neither an overwhelming solicitude for the public welfare nor any strenuous objection to the formation of a national department of health. The "league's" actual, and fairly evident, *raison d'être* is opposition to and antagonism against the American Medical Association. To disclose the source of this opposition it is only necessary to call attention to some of the members of the "advisory board"—high-sounding title—as reported in the newspapers, to make reasonably clear to the members of the American Medical Association the "power behind" the "league." The publisher of the *Medical Standard* and *Western Druggist*, for instance, has long been known as a defender of, and mouthpiece for the "patent medicine" and proprietary interests. His presence on the "advisory board" is fitting, and the only surprising thing about it is that he should have been guilty of such a tactical blunder as getting into the fierce light of publicity.

That the president of the A. D. S. should be on the "board" was to be looked for, and being looked for, is found. And there are others! Among the lesser satellites in this distinguished galaxy are those who very naturally might be expected to enter enthusiastically into such a campaign—the president of an antivivisection society, some "mental healers" and one or two journalists of varying degrees of obscurity. Of the latter, one has for years been strongly opposed to medical organization and more recently has taken up that mental vagary known as "new thought." Taking into consideration both the objects of the "league" and the personnel of its "board" one feels that the New York *Journal* expressed only a half-truth when it said:

> "The druggists and the proprietary medicine interests throughout the country are said to be chiefly concerned in defeating the Owen bill."

It would have been nearer the facts if for "defeating the Owen bill" were substituted the clause "attempting to disrupt the American Medical Association." A dozen years ago the public might not have been able to see the animus prompting this attack—today it is wiser.

As to the publicity which this sensational and costly campaign will give to the American Medical Association the medical profession may welcome it. One thing that has long been needed is that of directing the attention of the laity to the aims and accomplishments of the American Medical Association. It welcomes investigation—the more the public learns about the work the Association is doing the better for the Association. It has nothing to be ashamed of, but it has a great deal to be proud of; its work in the interests of both public welfare and scientific medicine is and always has been open and above board. The Association needs no defense; it is not only well able to stand on its record, but is proud of that record.

EFFECTIVE PRACTICAL WORK AGAINST TUBERCULOSIS

Some splendid examples of work that should prove highly effective in the campaign against tuberculosis and the spitting habit are reported from Salem,[1] Mass., and Rochester, N. Y. The carefully laid plans of the

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[1] The Salem campaign was described in The Journal, April 23, 1910, p. 1398.

Rochester Public Health Association included a billboard and advertising-sign campaign against the spitting evil, the distribution of small printed slips bearing warning against promiscuous spitting, factory talks of ten minutes each at noon by physicians, night meetings, a Children's Day, when the school children were instructed by prominent physicians on how to avoid disease, talks to fraternal organizations, trades unions, etc. One of the most valuable features was a series of "Tuberculosis Talkettes" in the five daily newspapers of Rochester by prominent physicians of the city, each "talkette" being a brief, terse presentation of a different phase of the tuberculosis question and the spitting evil. These consisted of not over forty or fifty lines in the paper, going directly to the point and telling in language easily understood by the layman the nature of tuberculosis, its cause, methods of transmission or contagion, the relation of the spitting habit to the spread of the disease, the necessity for personal and public hygiene, good habits, food, clothing, air, and various related subjects. All the subjects were treated in a way to show their practical application to the daily life and the welfare of each individual. The campaign reached its climax in a public meeting on April 22, at which Dr. Livingstone Farrand, executive secretary of the National Association for the Study and Prevention of Tuberculosis, Dr. John H. Lowman, Cleveland, O., and Professor Adolphus S. Knopf, New York, all enthusiasts in the fight against tuberculosis, gave addresses on tuberculosis. Following this meeting came Tuberculosis Sunday, observed all over the country, April 24, when the ministers of Rochester addressed their congregations on the work that had been done and the importance of its continuance. A long list of persons from the factories, mercantile establishments, fraternal orders, clubs, etc., was appointed by the Public Health Commission to act as permanent representatives in promoting the work of the Association. Such a vigorous campaign could scarcely fail to reach in some way every man, woman and child in the community, and its value in accomplishing the objects sought cannot be overestimated. Rochester and Salem are to be congratulated on these systematic efforts, which should serve as models everywhere, and then much real progress in the war on tuberculosis would be made.

IS IT TRUE? ASK YOUR DRUGGIST!

Elsewhere we call attention to the source and character of the opposition that has developed, ostensibly against the bill providing for a national department of health but actually against the American Medical Association. It is said that in the hearing before the committee having the bill in charge, Senator Smoot read a letter from the president of the National Association of Retail Druggists (and of the American Druggists Syndicate), claiming that 40,000 members of the N. A. R. D. were against the bill! If this statement is true it is well that the physicians of the country should know it; if it is false then the president of the N. A. R. D. (and of the A. D. S.) has grossly libeled and misrepresented the retail druggists of the country. We believe the statement, if made as reported, to be unequivocally false. We believe that the vast majority of the druggists who are members of the N. A. R. D. are in hearty sympathy with the aims and efforts of the medical profession to conserve the public health. We believe that while some of the officers of the N. A. R. D., because of their connection with the A. D. S., are bitterly opposed to the American Medical Association and all it stands for, they do not in any sense represent the attitude of the members of the former organization. In fact, it is unthinkable that the decent pharmacists of the United States should be lined up with "patent medicine" fakers, "newthought" faddists, antivivisection cranks, *et hoc genus omne.*

ORANGE-RED CLOTHING NO IMPROVEMENT

The acquisition by the United States of its island possessions and of interests in Panama and Cuba has raised many new problems concerning the health and comfort of the forces of occupation and administration in tropical climates. Among the questions arising has been the one of suitable clothing. An experiment made in the Philippines among the military forces was the use of orange-red underclothing as a protection against heat, and especially as a preventive of heat exhaustion. This experiment was made following the report of the British officers in India that such clothing was much more comfortable than the white in hot weather. The test clothing was distributed to half the men in each company, the other half wearing white garments of like texture as a control. In all 500 men wore the orange-red underwear, under similar conditions of physique, food and service, and careful records were kept of comparative amounts and nature of sickness among them, their feelings as to comfort or discomfort in the sun, their mental and bodily vigor, etc. The experiments continued for a year and a record of the weights and blood examinations were kept throughout this period. It was found that the record of sick admissions was about the same for both groups, they suffered equally from the heat of the sun, but those of the orange-red group suffered more from excessive perspiration, there was a greater loss of weight in the hot season by nearly a pound per man, and the blood changes noted in tropical climates—increase of red cells and loss of hemoglobin—were more pronounced. The blood pressure also showed a greater loss and the temperature, pulse and respiration showed a slightly higher rate for this group. The admissions for heat exhaustion and febricula were not reduced by the orange-red underclothing and the symptoms due to heat were about the same in the two groups. Only sixteen men out of the five hundred preferred the colored underclothing, and the persistent complaints of greater heat, greater weight and excessive perspiration indicated that the colored garments are more receptive to the heat rays than the white. The conclusion of the board conducting the experiment was that the orange-red clothing added materially to the burden of heat on the system; that while it protected from the chemical ray, the influence of this ray is negligible and it is sufficiently excluded by khaki clothing and the campaign hat, and that no beneficial effect was observed from this clothing.

Medical News

CALIFORNIA

Violates Medical Law.—Chow Juyan, a Chinaman, was fined $100 by Police Judge Deasy, San Francisco, May 5, with the alternative of fifty days' imprisonment in jail for practicing medicine without a license.

Children's Clinic Opened.—A free clinic has been opened by the Pasadena Hospital for children of the Pasadena schools. The clinic, while free to those who cannot pay, will be supported in part by contributions.

Fraternity Election.—At the annual election of the Delta Chapter of the Phi Rho Sigma Fraternity, College of Medicine of the University of Southern California, Los Angeles, held April 29, the following officers were elected: President, Dr. Milbank Johnson, Los Angeles; vice-presidents, Drs. Andrew S. Lobingier, Los Angeles, and Rexwald Brown, Santa Barbara, and secretary-treasurer, Dr. W. R. Maloney.

ILLINOIS

Fined for Violating Medical Practice Act.—Mrs. Ernestine Petersen, matron of the so-called Red Cross Sanitarium, Rock Island, on May 4, is said to have been fined $100 and costs on each of ten charges of violating the medical practice act of Illinois.

Personal.—Dr. William W. Williams has been elected president and Dr. Kirk S. Shawgo, secretary of the staff of the Blessing hospital, Quincy.——Dr. Edward Bowe has severed his connection with the Maplewood Sanatorium, Jacksonville.——Dr. Orlando F. Scott has been appointed health officer of Summit and Argo.

Court Doings.—In the case of Dr. St. Elmo M. Sala, Rock Island, against Charles E. Dempsey, a verdict was returned for the plaintiff May 17, with damages of $112. This case is interesting as the defendant had previously brought suit for $10,000 for malpractice and was non-suited. The litigation has continued for about five years.——In the case of Dr. Paschall N. Bowman, Gillespie, charged with manslaughter by the alleged unskilful performance of an operation, the jury was unable to agree and was discharged.

Society Meetings.—At the annual meeting of Brainerd District Medical Society, held in Lincoln April 28, the following officers were elected: President, Dr. Harry G. Hardt, Lincoln; vice-presidents, Drs. Charles W. Carter, Clinton; Chauncey W. Cargill, Mason City, and Edwin P. Sloan, Bloomington; secretary, Dr. Harry S. Oyler, Lincoln; treasurer, Dr. Chas. C. Reed, Lincoln, and censors, Drs. Irving Newcomer, Petersburg; James H. Butler, Hartsburg, and Albert E. Campbell, Clinton. The next meeting will be held in Springfield in July.——The thirty-sixth annual meeting of the Central Illinois District Medical Society was held in Pana April 26. The following officers were elected: President, Dr. Roscoe C. Danford, Pana; vice-presidents, Drs. George J. Rivard, Assumption, and William H. Sparling, Moweaqua; secretary, Dr. Walter Burgess, Pana, and treasurer, Dr. John N. Nelms, Taylorville; censors, Drs. Jacob Huber, Louis H. Miller, and Frederick J. Eberspacher, Pana; Dr. William J. Eddy, Shelbyville, and Dr. Dorwin D. Barr, Taylorville.

Chicago

Fined for Misbranding.—Mrs. Gervaise Graham is reported to have been fined twenty-five dollars by Judge Landis, May 16, for misbranding a dandruff cure. The wrapper bore a printed statement that a cure was guaranteed but the government declared that it is not possible to guarantee a cure for this condition of the scalp.

Byron Robinson Memorial Services.—Memorial services in honor of the memory of the late Dr. Byron Robinson were held at Whitney Opera House, May 22. President Charles R. Van Hise of the University of Wisconsin presided and Dr. William A. Evans gave an address on the life and work of Dr. Robinson.

Personal.—Dr. and Mrs. David Fiske and Dr. C. Bruce Walls and family have started for Europe.——Dr. Nils Theodore Quales has been awarded, by King Haakon of Norway, the order of St. Olaf.——Dr. Magnus-Levy, Berlin, who is staying in Chicago for a few days on his way West, was tendered a dinner at the University Club, May 23, by a few of his medical friends.

IOWA

Fined for Illegal Practice.—George Corwin, Brooklyn, a so-called chiropractic, charged with the illegal practice of medicine, is said to have been found guilty, April 1, and fined $300 and costs.

Hospital News.—The new addition to Graham Hospital, Keokuk, which will cost $15,000, will be completed and ready to receive patients July 1.——Waterloo is to have a new hospital in charge of the Franciscan Sisters. The building will be under construction this summer and will be ready for occupancy in July next year. The institution will be four stories in height, of fire-proof construction, and will accommodate 98 patients.

KANSAS

Hospital for Wellington.—The Commercial Club and soliciting committee for a hospital for Wellington obtained subscriptions of $10,000 in seven days. Of this, physicians of Sumner county subscribed $3,000. The hospital is to be in care of Bishop Frank Milspaugh.

Fine Increased After Appeal.—James Black, a negro who was recently fined $200 and given a sentence of sixty days in jail by the police judge in Kansas City for selling cocain, and appealed his case to the district court, had a rehearing, May 2, and was fined $300 and given a sentence of ninety days' imprisonment in jail.

KENTUCKY

School Children's Teeth Examined.—By authority of the health department and health officer of Louisville, the teeth of every school child of the city is to be examined. The actual work will be done by members of the Jefferson County Dental Association.

Decided Against Physician.—The suit of Miss Laura Crews, Lexington, against Dr. Benjamin F. Van Meter, is said to have been decided in favor of the plaintiff, with damages of $4,000. The suit was for $25,000 and alleged the unskilful performance of a surgical operation without the consent of the patient. On hearing of the verdict the Fayette County Medical Society at once adopted a resolution of confidence in Dr. Van Meter.

Society Meetings.—Warren County Medical Society, at its meeting in Bowling Green, adopted resolutions extending a vote of thanks to the representatives and senator for their assistance in passing the Health Bill through the last legislature, and approving the Owen Bill.——Bullitt County Medical Society held its annual meeting in Shepherdsville April 11, and elected Dr. Walter W. Hill, South Park, president; Dr. Samuel W. Bates, Shepherdsville, vice-president, and Dr. A. Capiston Overall, Mount Washington, secretary-treasurer.——Muhlenberg County Medical Society, at its annual meeting in Central City, April 28, elected the following officers: President, Dr. John P. Walton, Central City; vice-president, Dr. Henry Y. Slaton, Greenville; delegate to the state medical society, Dr. Milton P. Creel, Central City, and alternate, Dr. Thomas G. Turner, Dunmor.——Muldraugh County Medical Society, at its annual session, April 14, adopted resolutions favoring the creation of a national department of health.

LOUISIANA

Auto Ambulance.—A new automobile ambulance, donated to the Charity Hospital, New Orleans, by the members of Mecca Temple Ancient Order of the Nobles of the Mystic Shrine, New York City, at a cost of $9,000, was received from New York, April 11, and was at once put into commission.

Personal.—Dr. Charles J. Landfried has been appointed surgeon in charge in the ear, nose and throat department of the Eye, Ear, Nose and Throat Hospital, New Orleans, to succeed Dr. Oscar Dowling, Shreveport, who was recently elected but resigned.——Dr. C. Milo Brady, New Orleans, has returned after several months spent in the study of tropical diseases on the West Coast of Africa.——Dr. and Mrs. Louis A. Meraux, New Orleans, left for Europe May 14.

Society Meeting.—At the annual meeting of East Feliciana Parish Medical Society, held at the Insane Hospital of the State of Louisiana, Jackson, April 6, the following officers were elected: President, Dr. Jesse W. Lee, Jackson; vice-president, Dr. William F. H. Hagaman, Norwood; and secretary-treasurer, Dr. Robert P. Jones, Clinton. By unanimous vote, the society dropped from its rolls Dr. Emmett C. McKowen, Clinton, who is said recently to have been found guilty of murder in connection with the death of a patient in the insane hospital.——Claiborne Parish Medical Society, at its annual meeting in Athens, April 27, reelected the following officers: President, Dr. Joseph W. Day, Homer; vice-presidents, Drs.

Phillip Gibson, Homer, Lee T. Waller, Haynesville, and James F. Simpson, Athens; secretary-treasurer, Dr. William L. Stone, Homer, and delegate to the state society, Dr. Lee T. Waller.

MAINE

Off for Europe.—Drs. Oliver W. Turner, Albert H. Sturtevant, Wellington Johnson, William H. Harris and George R. Campbell, Augusta, Dr. Lewis K. Austin, Waterville, and *Dr. and Mrs. John G. Gehring, Bethel, have started for Europe.*

Hospital Staff Elected.—The trustees of the Webber Hospital, Biddeford, have elected the following staff: Surgery—Drs. M. Hubbard Ferguson and Caleb J. Emery, Biddeford, and Jasper D. Cochrane and Clarence E. Thompson, Saco; medicine—Drs. Augustus Thayer, Addison S. Thayer and Charles B. Witherle, Portland, and Dr. Samuel J. Bassford; eye and ear—Drs. John W. Bowers, Dexter J. Clough, Erastus E. Holt, Willis B. Moulton, Albion H. Little and William Moran, Portland, and Dr. Charles M. Sleeper. South Berwick; nose and throat—Drs. John H. Allen and Owen P. Smith, Portland; and obstetrician—Dr. Stanley P. Warren, Portland. The consulting staff includes Drs. F. S. Warren, Biddeford, James O. McCorrison, North Berwick, John L. M. Willis, Eliot, Frank M. Ross. Kennebunk, Harry L. Prescott, Kennebunkport, Joseph W. Gordon, Ogonquit, Jesse A. Randall, Old Orchard, Charles W. Blagden, Sanford, Fred A. Bragdon, Springvale, and Drs. Edville G. Abbott, William H. Bradford. Henry H. Brock, William L. Cousins, Fred H. Gerrish, Arthur S. Gilson, Seth C. Gordon. Alfred King, Charles M. Leighton, Alfred Mitchell, Jr., Willis B. Moulton, Richard D. Small, John F. Thompson, Philip P. Thompson, Walter E. Tobie and Herbert F. Twitchell, Portland.

MASSACHUSETTS

Carnation Day at Lynn.—May 14 was observed in Lynn as "carnation day" and 30,000 carnations were sold for the benefit of the State Tuberculosis Camp, Swampscott.

Personal.—Dr. Frank H. Zabriskie has resigned as a member of the board of health of Greenfield.——By the will of Mrs. Annie Preston Lincoln, Boston, Dr. Edward B. Kellogg is bequeathed $25,000.——Dr. Ralph B. Ober, Springfield, is reported convalescent from the effects of septicemia due to a postmortem wound.

Tuberculosis Camp Opened.—The camp of the Springfield Association for the Prevention of Tuberculosis was opened for the summer at East Longmeadow, May 12, with six patients in attendance. The present capacity of the camp is twenty-two.

MISSISSIPPI

Personal.—Dr. Thomas J. Mitchell, for many years superintendent of the State Insane Hospital, Asylum, has resigned and will practice in Jackson.——Dr. Waller S. Leathers has been appointed director of public health and sanitation of the state board of health and chief bacteriologist of the state laboratory to be established in Jackson.

Hospital Appropriation Bill Passed.—Among the principal appropriation bills passed by the legislature is one appropriating $50,000 for the erection and equipment of a Central State Charity Hospital at Jackson. The bill contains a provision that the city of Jackson and Hinds county shall contribute $25,000 toward the building and equipment fund.

MONTANA

Ricketts' Memorial Prize.—At the closing session of the Montana State Medical Association, a resolution was adopted providing for a memorial medal, in honor of Dr. Howard Taylor Ricketts, to be given to the member presenting the best paper before the society at its annual session.

NEBRASKA

Graduation Exercises.—The College of Medicine of the University of Nebraska held its annual commencement exercises May 19, and graduated a class of seventeen. Robert H. Walcott, dean of the college, presided, and the doctorate address was delivered by Dr. Woods Hutchinson, New York City.——At the annual commencement exercises of the John A. Creighton Medical College, Omaha, April 30, forty-four were graduated from the medical department. Dean A. Hugh Hipple presided over the program of the evening.

State Association Meeting.—The forty-second annual meeting of the Nebraska State Medical Association was held in Lincoln, May 10-12, under the presidency of Dr. P. Harold Salter, Norfolk. The following officers were elected: President, Dr. John P. Lord, Omaha; vice-presidents, Drs. Harry M. Hepperlein, Beatrice, and Charles A. Anderson, Stromsburg; councilors, Drs. Anders P. Ovargaard, Fremont, John C. Malster, Stromsburg, Fletcher A. Butler, Harvard, John P. Gilligan, O'Neill, and Henry B. Lemere, Omaha; delegates to the American Medical Association, Dr. P. Harold Salter, Norfolk, and alternate, Dr. William J. Birkhofer, Goethenburg. The House of Delegates instructed the secretary to telegraph Senator Owen commending his efforts to secure the establishment of a national department of health. The society adjourned to meet next year in Omaha.

NEW HAMPSHIRE

State Society Meeting.—The New Hampshire Medical Society held its one hundred and nineteenth annual session in Concord, May 12 and 13, under the presidency of Dr. Frank Blaisdell, Goffstown. The following officers were elected and installed: President, Dr. Alonzo S. Wallace, Nashua; vice-president, Dr. George W. McGregor, Littleton; secretary (for five years), Dr. Pearl T. Haskell, Concord; councilor for Hillsboro county, Dr. E. Blaylock Atherton, Nashua; trustees, Drs. John M. Gile, Hanover, and John W. Parsons, Portsmouth; medical examiner, Dr. Arthur C. Heffinger, Portsmouth; alternate, Dr. Abram W. Mitchell, Epping; delegate to the American Medical Association, Dr. Ferdinand A. Stillings, Concord; alternate, Dr. John Z. Shedd, North Conway; delegates to state societies, Drs. J. W. Bates, Rochester, to the Maine Medical Association, Dr. Charles A. Morse, Newmarket, to the Massachusetts Medical Society, Drs. Arthur F. Sumner and George C. Wilkins, Manchester, to the Vermont State Medical Society, Dr. William H. Leith, Lancaster, and Ira J. Prouty, Keene, to the Medical Society of the State of New York, and Drs. Edgar O. Crossman, Lisbon, and John M. Gile, Hanover, to the Rhode Island Medical Society; necrologist, Dr. Eli E. Graves, Boscowen, and anniversary chairman, Dr. Charles S. Little, Laconia.

NEW JERSEY

Personal.—Dr. Patrick A. Shannon, New Brunswick, returned from Europe May 8.——Dr. William S. MacLaren has been appointed medical instructor in the public schools of Princeton Borough and Dr. Arthur K. MacDonald in the public schools of Princeton and Lawrence townships.

Society Meetings.—The annual meeting of the Medical Society of Hunterdon County was held in Flemington, April 26, and the following officers were elected: President, Dr. George Henry, Flemington; vice-presidents, Drs. Isador Topkins, Califon, and Henry H. Miller, Lebanon; secretary, Dr. Obadiah H. Sproul, Flemington; treasurer, Dr. Isaac S. Cramer, Flemington; and censors, Drs. George L. Romine, Lambertville; George N. Best, Rosemont, and Leon T. Salmon, Lambertville.——At the annual meeting of Salem County Medical Society, held in Salem May 5, the following officers were elected: Dr. George W. Fitch, Daretown, president; Dr. Henry T. Johnson, Pedricktown, vice-president; Dr. Henry Chavanne, Salem, secretary-treasurer; Dr. John F. Smith, Salem, reporter, and Drs. Emerson P. McGeorge, Woodstown; William H. James, Pennsville, and Richard M. Davis, Salem, censors.——The Society for the Relief of Widows and Orphans of Medical Men of New Jersey held its twenty-eighth annual meeting May 11, in Newark, and elected the following officers: President, Dr. Charles J. Kipp, Newark; vice-president, Dr. Archibald Mercer, Newark; secretary, Dr. Charles D. Bennett, Newark; treasurer, Dr. George R. Kent, Newark; custodians of the permanent fund, Drs. Norton L. Wilson, Elizabeth, and Thomas W. Harvey, Orange; and trustees, Drs. James H. Rosenkrans, *Hoboken, and Charles F. Underwood, and Edward Staehlin,* Newark.

NEW YORK

No Tuberculosis Sanatorium at Liberty.—The State Commissioner of Health, after a careful consideration of the application of the Independent Order of Brith Abraham of the United States of America, for permission to establish a preventorium and camp for the treatment of tuberculosis in the town of Liberty, felt constrained to deny the same, and has so notified the petitioners.

Practice Training for Health Officers.—Opportunities for the practical training of health officers in the work of inspection, diagnosis, quarantine, disinfection, etc., actual work of the daily duties of the Quarantine Station, are offered to all the health officers of the state throughout the summer by the courtesy of Dr. Alvah H. Doty, Health Officer of the Port of New York. These facilities are available for six persons at a time.

Mail for the Insane.—Attorney General O'Malley has given an opinion which establishes the rights of idiots and lunatics in the state institutions to receive mail. He states that the officers of such an institution have no right to open mail addressed to inmates, but have the right and the authority to make rules and regulations, subject to the approval of the State Board of Charities, preventing the delivery of letters to such inmates, or to prevent letters being sent by them to outside persons, when, in their judgment, this might cause interference with the safe administration of the affairs of the institution.

Opposed to Metropolitan Life Company's Institution.—It has been announced that the residents of Somers, within whose limits the proposed site for the sanatorium for the treatment of employees of the Metropolitan Life Insurance Company having tuberculosis lies, will make a vigorous fight against the erection of the proposed institution in this locality. Edward Hatch, the chairman of the pollution committee of the Merchant's Association, states that he considers that the establishment of a sanatorium for the treatment of tuberculosis within the boundaries of the water shed that supplies the drinking water for New York City will endanger the lives of millions of people.

Bills Signed by Governor.—Governor Hughes has signed the following bills: A bill providing that the Mount Vernon Board of Health shall consist of the mayor and at least six other persons: the Green Bill, amending the liquor tax law by prohibiting liquor to be sold or even given away except on the written prescription of a physician, to any patient affected with tuberculosis in a camp, colony or hospital established by the state, county or municipal authorities, and a bill bringing the Mohansic State Hospital under the jurisdiction of the State Lunacy Commission and authorizing the commission to provide for the committment of patients from any part of New York to this institution.

Deciding the Milk Standard.—The Baumes bill, which provides that the standard of milk in the state shall be lowered by declaring only such milk adulterated as contains less than 11½ instead of less than 12 per cent. of milk solids, has been argued before Governor Hughes. Many milk producers defended this measure, but the health commissioner of New York City was opposed to the reduction of the standard as being against the public interest in New York City. He stated that lowering the standard to the degree mentioned would make it possible to water the milk supply of New York City to the extent of 75,000 quarts daily, which would mean a daily loss of $6,000 to the people of that city. The New York State Breeders' Association also sent a protest against a lowering of the standard.——A bill designed to permit the sale of skimmed milk cheese and skimmed milk powder in New York and Kings counties has been passed by the senate after considerable hesitation. This bill, if it becomes a law, will permit the manufacture of skimmed milk products in New York City. It is stated that Commissioner Pearson of the State Department of Agriculture has given the bill his approval.

New York City

Off for Europe.—Drs. Graeme M. Hammond, Daniel M. Stimson and Frank B. Cross have sailed for Europe.

New Laboratory.—Mr. Adolph Lewisohn has given $130,000 to Mount Sinai Hospital for the erection of a pathologic laboratory building.

Heavy Sentence for Cocain Seller.—Edward Lewis, a cocain seller who has been arrested four times and convicted twice, has been sentenced to two years in the penitentiary.

Fellowship Established.—Mount Sinai Hospital announces the establishment of a second fellowship in pathology, the income of which amounts to $500 per annum, to be known as the Eugene Meyer, Jr., fellowship.

Open Hospital at Coney Island.—The Coney Island Branch of the Kings County Hospital was opened on May 18. The building is thoroughly modern and will accommodate 100 patients. Dr. Charles Durning will be Superintendent.

Measles on Ocean Liner.—The Cunard steamer, *Carpathia*, from the Mediterranean, was detained at Quarantine, May 10, on account of the presence of measles which necessitated the transfer to Hoffman Island of 40 of the 325 children which were on board.

Resolutions Regarding Dr. Goelet.—At a meeting of the Tri-Professional Medical Socie of New York, May 17, resolutions were adopted setting forth the careful; accurate and kindly work, the personal magnetism, the warm friendship and the love for truth, of its late me er, Dr. Augustin H. Goelet.

New Building for Medical School Work.—Work has been commenced on the new hospital building for the New York Postgraduate Medical School. The building will be twelve stories in height and will cost $600,000. It will be provided with ample means for open-air treatment including a roof pavilion.

The New York Neurologic Institute.—This institution has just made public the report of its first year's work. During the year 220 cases of nervous disease were registered. The growth of the institution has fully demonstrated the necessity for a hospital and dispensary devoted to diseases of the mind and nervous system. When the hospital was opened it was thought that ample provision had been made for some time to come, but there is already need of more extensive accommodations.

Dulness and Bad Teeth.—Dr. Luther H. Gulick, director of the department of child hygiene of the Russell Sage Foundation, states that at least one-half of the school children have defective teeth and that children with defective teeth take half a year longer to complete the eight grades of the elementary course than children who have good teeth. Dr. Gulick has conducted studies on 40,000 school children in New York City during the past two years. He advises further instruction in the public schools regarding the teeth and their care.

New Buildings of Long Island College Hospital.—During the past ten years the old Long Island College Hospital has been removed piece by piece and replaced by new buildings. The last section of the old building is now being removed to make place for a new wing. The entire cost of the new building will be about $2,000,000. The section now under construction will contain about 200 beds for male patients and the new hydrotherapeutic and electrotherapeutic equipment. This hospital has its own incinerator for burning garbage and obtains its supply of water from its own wells.

Buffalo

Tuberculosis Camp Opened.—The tuberculosis day camp was opened for the reception of patients, May 25.

Alumni Meeting.—At the annual reunion of the Alumni Association of the University of Buffalo, May 24, Dr. J. Clarence Webster, Chicago, delivered the Harrington lecture and a dinner was tendered to Dr. Matthew D. Mann in recognition of his many years of faithful service as professor of obstetrics and gynecology.

Tuberculosis Work in Buffalo.—The first annual report of the Buffalo Association for the Relief and Control of Tuberculosis shows that the day camp was open 141 days. During this time 95 patients were admitted, of whom 38 were male and 57 females. The total number of treatment days was 5,545, and the average daily attendance 39.32. Of the cases treated 25 were incipient; 23, moderately advanced; 41, advanced; 2, surgical; and 4 patients came for observation. During the two years the dispensary has been open 1,140 cases have been examined, of which 339 were definite cases of tuberculosis; 89 were doubtful; in 29 there were tubercular lesions other than of the lungs, and 683 patients, or nearly 60 per cent. were non-tubercular.

NORTH DAKOTA

Hospital for Minot.—At a meeting recently held in Minot, $9,000 was pledged for a Benedictine Sisters Hospital to cost about $70,000.

Health League.—A public health league was organized at Minot, April 30. Dr. Gustave F. Ruediger, Grand Forks, director of the state public health laboratory, delivered an address, at the conclusion of which the league was organized, with Dr. Andrew Carr, Minot, as vice-president.

Society Meetings.—At the annual meeting of the Traill and Steele County Medical Society, held in Portland, Dr. William E. White, Mayville, was elected president; Dr. Annt G. Anderson, Hillsboro, vice-president; Dr. Daniel E. Rogers, Portland, secretary-treasurer, and Dr. Edward C. Haagensen, Hillsboro, delegate to the state society.——A medical association for Burleigh county has been organized at Bismarck.

OKLAHOMA

Law Cases.—The jury acquitted Dr. Thomas E. Shepherd, Tulsa, who was charged with manslaughter.——Dr. Leander A. Riely, Oklahoma City, was sued for $5,000 for alleged failure to locate a broken bone in the leg and the verdict is reported to have been for $750.

Public Health Officials Meet.—The meeting of the Oklahoma Public Health Association was held in Tulsa May 10-12. Dr. Herbert L. Wright, Hugo, was elected president; Dr. Charles L.

Reeder, Tulsa, vice-president, and Willis A. Logan, Lehigh, secretary-treasurer. Before the close of the meeting, Dr. John C. Mahr, Shawnee, state commissioner of health, was presented by the members of the association with a diamond ring in appreciation of his work in behalf of the health of the state.

PENNSYLVANIA

Philadelphia

Honor Retiring Professor.—Dr. James Tyson who has recently retired from the teaching staff of the medical school of the University of Pennsylvania, was presented with a silver loving-cup and a silver platter by his senior and junior students, May 13.

Cocain Dealer Pleads Guilty.—Abraham Hall, a colored man, is said to have pleaded guilty in Quarter Sessions Court, April 26, to the charge of the unlawful sale of cocain and to have been sentenced to imprisonment in the eastern penitentiary for not less than six months nor more than two years, and to a fine of $500.

Resolutions Regarding Dr. Ricketts.—At a meeting of the College of Physicians of Philadelphia, May 13, resolutions were adopted setting forth the heavy blow sustained by medical science and the public welfare in the death of Dr. Howard Taylor Ricketts, briefly noting the research work done by Dr. Ricketts regarding blastomycosis, immunity, Rocky Mountain spotted fever and typhus fever; bearing witness to his remarkable qualities of intellect and personal qualities, and closing with the statement, "Thus this man died, leaving his death for an example of noble courage and a memorial of virtue, not only to young men but unto all his nation."

Labor Union to Fight Tuberculosis.—The Central Labor Union held a meeting on May 18, for the discussion of plans to be adopted in its proposed fight against tuberculosis. The meeting was arranged by J. Byron Deacon, secretary of the Society for the Prevention of Tuberculosis. Dr. James Tyson presided and addresses were made by Rev. George C. Richmond, rector of St. John's Episcopal Church, and P. V. Danshay, of Albany, a member of New York State Immigration Commission, director of the labor department of the New York State Charity Aid. It is proposed to establish a big double camp for day and night uses, where patients may go regularly for fresh air, milk and eggs, and three meals with nurses and physicians in attendance. In the day camp the patients would live in the open, going home to sleep at night. It would be part of the duty of the nurses to go to the homes, giving instructions there for open air sleeping. A night camp would be established for those workingmen who had been cured or who had the disease arrested and were able to return to the city to work.

SOUTH DAKOTA

Hospital Organized.—The German Baptist Hospital for the Dakotas was organized in Emery recently, and Dr. Carl A. Homan was elected chief surgeon.

Sanatorium Site Selected.—The State Board of Correction and Charities have selected the Hand Ranch, four miles south of Custer, as the most desirable location for the new tuberculosis sanatorium, for the erection of which the last legislature made an appropriation of $10,000. The ranch consists of 160 acres, of which 70 are in cultivation.

Personal.—Dr. F. A. Van Buren, Edgemont, has been appointed local surgeon for the Burlington System.——Dr. G. Hayward Coburn, Deadwood, was given a farewell banquet by the Black Hills Medical Society on the occasion of his approaching departure for Chicago.——Dr. Francis A. Moore, Lesterville, has gone to New York City for a year of post-graduate work.

Railway Surgeons Convene.—Surgeons representing the Chicago, Milwaukee & St. Paul and Chicago & Northwestern railroads held their annual meeting in Rapid City, May 11, and elected the following officers: Dr. William E. Moore, Tyndall, president; Dr. Delorme W. Robinson, Pierre, vice-president; Dr. John L. Foxton, Huron, secretary-treasurer, and Drs. C. W. Hargens, Hot Springs, William R. Ball, Mitchell, and Hiram E. McNutt, Aberdeen, executive committee.

TENNESSEE

Personal.—Dr. William Hardy, a recent graduate of the Medical Department of Tennessee University, Nashville, has been ordained as a missionary, and will sail from San Francisco to his new field of work in Batang, Thibet, May 24.

New County Society.—The McNairy County Medical Society was organized at Selmer, April 21, and the following officers were elected: President, Dr. William H. Hodges, McNairy; vice-president, Dr. James L. Smith, Selmer; secretary, Dr. W. T. Bell, Selmer; and treasurer, Dr. J. R. Smith, Selmer.

State Association Election.—At the annual meeting of the Tennessee State Medical Association held in Memphis, May 12 to 15, Dr. John A. Witherspoon, Nashville, was elected president and Drs. Richard A. Barr, Nashville, Joseph J. Waller, Oliver Springs, and J. H. Eugene Rosamond, Memphis, were elected vice-presidents.

TEXAS

Medical Directors Meet.—The Texas Association of Medical Directors held its first annual session in Dallas May 10. Dr. John H. Florence, Houston, was elected president; Dr. John S. Lankford, San Antonio, vice-president, and Dr. Mathew M. Smith, Dallas, secretary-treasurer. The membership includes both medical directors of both old-line life and fraternal insurance companies.

Alumni Associations Organized.—At a meeting held in Dallas, May 11, Memphis Hospital Medical College Alumni Association for Texas was organized with the following officers: President, Dr. R. Walter Smith, Moffat; vice-president, Dr Samuel A. Woodward, Fort Worth, and secretary-treasurer, Dr. Andrew B. Small, Dallas.——The Texas Alumni of the University of Pennsylvania organized an association at Dallas, May 11, and elected Dr. Jacob M. Frazier, Belton, president, and Dr. Marion P. Stone, Dallas, secretary.——Graduates of medical colleges of Louisville, Ky., practicing in Texas, met at Dallas, May 11, and organized an alumni association with an initial membership of fifty. The following officers were elected: Dr. James R. Lancaster, Granbury, president; Drs. William C. Crutcher, Mount Vernon, and Samuel E. Milliken, Dallas, vice-presidents; and Dr. Albert M. Gantt, Dallas, secretary.

Society Meetings.—Walker County Medical Association was organized in Huntsville, May 6, with an initial membership of seven. Dr. William E. Fowler, Huntsville, was elected president, and Dr. Leonard H. Bush, Huntsville, secretary-treasurer. ——At the annual meeting of Burleson County Medical Society, held in Caldwell, April 27, Dr. James P. Oliver was elected president and delegate to the state association; Dr. Joseph W. Matthews, vice-president, and Dr. Oscar Krueger, secretary-treasurer, all of Caldwell.——At the meeting of Brazoria County Medical Society, April 24, the following officers were elected: President, Dr. Samuel B. Maxey, Angleton; vice-president, Dr. C. C. Hampil, Perry Landing, and secretary-treasurer, Dr. D. C. DeWalt. The society starts out with a membership of twelve.——The physicians of Fort Bend County met in Richmond recently and organized a county medical association, and elected the following officers: Dr. James C. Johnson, Richmond, president; Dr. J. B. Turner, secretary-treasurer, and Dr. J. Mark O'Farrell, Richmond, delegate to the state association.——At the annual meeting of Webb County Medical Society, held in Laredo, May 5, Dr. Edward H. Sauvignet was elected president; Dr. Henry J. Hamilton, secretary-treasurer, and Dr. Albert W. Wilcox, delegate to the state association, all of Laredo.

VIRGINIA

Personal.—Dr. William W. Murray, Suffolk, has been appointed local surgeon for the Southern Railway.——Dr. John Augustine English Eyster, University, has accepted the chair of physiology in the University of Wisconsin.——Dr. Thomas J. Hughes, Saltville, has returned from Europe and located in Roanoke.

Commencement Exercises.—The Medical College of Richmond, Va., celebrated its annual exercises, May 18. Dr. Lyon G. Taylor, president of William and Mary College, delivered the doctorate oration and Dr. Simon Baruch, New York City, delivered the address before the alumni on "Some Therapeutic Lessons from Half a Century's Practice." A class of forty-six was graduated.——University College of Medicine, Richmond, held its annual commencement exercises May 17. Addresses were delivered by Major C. Hemphill, editor of the Richmond *Times-Despatch*, and the president of the college, Dr. Stuart McGuire. A class of 25 was graduated.

Society Election.—The semi-annual meeting of the Northern Neck Medical Association was held in Heathsville, April 28, and the following officers were reelected: President, Dr. Andrew C. Fisher, Emmerton; vice-presidents, Drs. C. T. Pierce and Loren E. Cockrell, Redville; secretary, Dr. Robert O. Lyell, Warsaw, and treasurer, Dr. Walter N. Chinn, Hague.——At the annual meeting of Alexandria Medical Society, Dr. Samuel B. Moore was elected president; Dr. Robert L. Wilkins, secretary, and Dr. Llewellyn Powell, treasurer.——The physicians of Alleghany County met in Clifton Forge, May 3, and organized a county medical society, with initial membership of ten. Dr. John C. Wysor, Clifton Forge, was elected president; Dr. Orville L. Rogers, Covington, vice-president; Dr. Courtney Edmond, Clifton Forge, secretary, and Dr. John W. Wallace, Covington, treasurer.

WASHINGTON

Used Mail to Defraud.—For using the mail in connection with a scheme to defraud, the managers of the Davis Medical Institute, Spokane, are said to have been sentenced to thirty days' imprisonment in jail and to pay a fine of $500.

Illegal Practitioners Arrested.—Detectives in the employ of the State Medical Board, operating under the direction of the prosecuting attorney of Seattle, have arrested eight alleged illegal practitioners of medicine, chiropody and osteopathy, including two Chinamen.

New Hospitals.—The cornerstone of the new buildings for the Providence Hospital, Seattle, was laid with appropriate ceremonies, May 1. Since the hospital was organized in 1878, more than 65,000 patients have been cared for by the institution.——The contract for the new two-story annex to the Pierce County Hospital, Tacoma, has been awarded. The building will cost about $4,000.

GENERAL NEWS AND COMMENT

Pension for Yellow Fever Victim.—As a reward for his services in the study of yellow fever, John Kissinger of Indiana, formerly private in the U. S. Army, was granted an annuity of $1,500 by the United States Senate.

Laryngologic Officers.—The secretary of the American Laryngological, Rhinological, and Otological Society writes that the Dr. Dudley noted in THE JOURNAL, May 14, as one of the vice-presidents-elect should be Dr. William H. Dudley, Los Angeles, Cal., and not William F. Dudley, Brooklyn.

Meeting of Railway Surgeons.—The third annual convention of the Association of the Norfolk and Western Railway was held in Norfolk, Va., May 4. Dr. Southgate Leight, Norfolk, was elected president; Dr. Sparrell S. Gale, Roanoke, first vice-president, and Dr. John R. Garrett, Roanoke, secretary-treasurer.

The Exceptional Child.—The National Association for the Study and Education of Exceptional Children held its first annual conference at New York University, April 21 and 22, under the presidency of Thomas H. Balliet, Ph.D., dean of the New York University School of Pedagogy. The session topics were "The Recognition of the Problem of the Exceptional Child," "Phases of Exceptional Development," and "The Perspective of the Problem of the Exceptional Child."

Confederate Surgeons Hold Meeting.—The thirteenth annual meeting of the Association of Medical Officers of the Army and Navy of the Confederacy was held in Mobile, April 26 and 27, under the presidency of Dr. Gustavus B. Thornton, Memphis, Tenn. Dr. Edwin D. Newton, Atlanta, was elected president, and Dr. A. A. Lyon was reelected secretary-treasurer.

American Museum of Safety.—The American Museum of Safety has opened permanent museum headquarters in New York, for demonstrations under power of safety devices to prevent industrial accidents. The museum is for the benefit of employers of labor in factories and industrial establishments and for the public generally, as a means of education in the matter of accident prevention. Approximately, 500,000 persons were killed or maimed in industrial pursuits in the United States during 1909, and 50 per cent. of these accidents undoubtedly were preventable. In a large steel plant employing 6,000 men, there were 40 fatalities in 1906. After installing safety devices there were only 12 fatalities in 1909 in the same establishment which then employed 7,000 men. The American Museum of Safety is an organization doing a practical humanitarian work and should be supported in every way.

Meeting of Far Eastern Association of Tropical Medicine.—The first biennial meeting of the Far Eastern Association of Tropical Medicine was held in Manila beginning March 5. Delegates were present from governments and medical organizations from nearly every country and colony of the Far East—the Indias, Ceylon, China, Japan, New Zealand, and the Philippine Islands. The association held eight sessions and continued until March 14. The convention was a successful one, and the *Bulletin of the Manila Medical Society*, says that never before have so many representative men from so many political entities gathered in conference in the tropics for the purpose of discussing the sanitary prob'ems peculiar to warm climates. Heretofore such large and important meetings have been held in temperate climates away from the environment where the practical side of the questions under discussion could not be made part of the proceedings. Dr. Paul C. Freer, Manila, was president of the association.

Alumni Entertainments at St. Louis.—The following is a partial list of alumni gatherings to be held June 7, 1910, during the session of the American Medical Association at St. Louis. *Alumni are asked to record their names, either at the Coliseum or at the Southern Hotel or elsewhere, as specified below, between 9 a. m. and 5 p. m., on Tuesday, June 7.* The recording at the Southern Hotel will be at a desk, which will be easily found in the lobby.

BARNES UNIVERSITY, MEDICAL DEPARTMENT.—Registration at Southern Hotel lobby. Seventeenth annual banquet at Planters Hotel, 8 p. m.

COLLEGE OF PHYSICIANS AND SURGEONS (COLUMBIA UNIVERSITY, NEW YORK).—Registration at Southern Hotel lobby. Reunion Tuesday. Particulars to be announced.

HARVARD UNIVERSITY MEDICAL SCHOOL.—Registration at Southern Hotel lobby. Dinner at the University Club, 7:30 p. m., June 7.

JEFFERSON MEDICAL COLLEGE.—Registration at Southern Hotel lobby. Banquet to be announced later. Information at registration desk or communicate with Dr. A. P. Munsch, 1239 Kingshighway, St. Louis.

NORTHWESTERN UNIVERSITY, SCHOOLS OF MEDICINE, DENTISTRY AND PHARMACY.—Registration at exhibit in Coliseum, 9 a. m. to 5 p. m., Tuesday, June 7. Banquet at Planters' Hotel, 7:30 p. m. Tickets for banquet at registration desk, or communicate with Dr. William Engelbach, Humboldt Building, St. Louis.

RUSH MEDICAL COLLEGE.—Registration at Southern Hotel lobby. Dinner to be announced.

ST. LOUIS UNIVERSITY MEDICAL DEPARTMENT.—Registration at exhibit in the Coliseum, 9 a. m. to 5 p. m., Tuesday, June 7. Banquet at Jefferson Hotel at 8 p. m. Tickets at registration desk, or communicate with Dr. P. H. Swahlen, Metroplitan Building, St. Louis.

TULANE MEDICAL SCHOOL.—Registration at Southern Hotel lobby. Banquet at Jefferson Hotel, 7:30 p. m. Tickets for banquet at registration desk or communicate with Dr. H. J. Scherck, Century Building, St. Louis.

UNIVERSITY OF NASHVILLE AND TENNESSEE.—Headquarters and registration, Rooms 80, 82 and 84, Southern Hotel, 9 a. m. to 5 p. m., Tuesday, June 7. Dinner to be announced.

UNIVERSITY OF MICHIGAN.—Registration at Southern Hotel lobby. Reunion planned.

VANDERBILT UNIVERSITY MEDICAL DEPARTMENT.—Headquarters and registration at the American Hotel, Seventh and Market streets. Reunion and banquet at American Hotel, 7 p. m..

WASHINGTON UNIVERSITY MEDICAL DEPARTMENT.—Registration at Southern Hotel lobby. Smoker for alumni, including Missouri Medical College and St. Louis Medical College, Tuesday, June 7, place to be announced.

CANADA

School of Anatomy Incorporated.—The Hamilton School of Anatomy has been incorporated by Drs. Ingersoll Olmsted, Archibald E. Mallach, and Alexander B. Osborne.

Unlicensed Practitioner Fined.—R. G. Galbraith, Spring Creek, Sask., is reported to have been found guilty of practicing medicine without a license and fined $50 and costs. The prosecution was undertaken by the College of Physicians and Surgeons of Saskatchewan.

Roddick Bill Held Over.—At the recent session of the federal parliament nothing was done toward amending the Canada Medical Act, known as the Roddick Bill. Action is said to have been deferred on account of solicitations from the medical council of British Columbia.

Medical Graduates Receive Diplomas.—At the commencement exercises of the Western Medical School, London, May 2, diplomas and medals were distributed to the graduating class by Dr. Robert Ferguson. Dr. Walter H. Moorhouse presided at the convocation.

Society Meeting.—At the annual meeting of the Ottawa Medical and Chirurgical Society, April 1, Sir James A. Grant, M.D., was elected honorary president; Dr. Thomas Gibson, president; Dr. Clarence H. Brown, first vice-president; Dr. John D. Courtenay, second vice-president; Dr. F. W. C. Mohr, secretary; Dr. Arthur S. McElroy, treasurer; Dr. Robert Law, librarian, and Dr. Warren S. Lyman, curator.

Dominion and Province Societies to Meet.—The forty-third annual meeting of the Canada Medical Association will be held in Toronto, June 1-4, under the presidency of Dr. Adam H. Wright, Toronto. The entertainment provided includes a smoking concert, and excursions to Niagara Falls and Guelph.——The Manitoba Medical Association will hold its annual meeting in Winnipeg May 26 and 27.——The annual meeting of the British Columbia Medical Association will be held in Vancouver, August 16 and 17, under the presidency of Dr. R. W. Irving, Kamloops.

Personal.—Dr. Charles F. Martin, Montreal, has returned from the Mediterranean.——Dr. John W. Stirling, Montreal, has returned from Europe.——Dr. John T. Fotheringham, Toronto, has returned from a trip to Jamaica.——Dr. Frederick A. Clarkson, Toronto, has gone to Germany for the summer.——Dr. George R. McDonagh has returned from the south of France.——Dr. E. A. McCullough, Toronto, has been appointed superintendent of the Sanatorium for Tuberculosis at London, Ont.——Dr. Albert A. McDonald has been elected president, and Dr. W. Harley Smith, secretary of the Academy of Medicine, Toronto.——Dr. Wesley Mills, professor of physiology in McGill University, has resigned.

Reunion of McGill Graduates.—The opening of the new medical buildings for McGill University, June 6 and 7, will be a notable event as more than 500 graduates from all parts of the world are expected to congregate in honor of their alma mater. On the first day an informal luncheon will be given at McGill Union by the teaching staff of the university; in the afternoon, the convocation will be held; in the evening the new building will be opened, and a conversazione will be given by the governors of the university. On the second day, clinics and demonstrations will be given in the morning and afternoon in hospitals and laboratories; class reunions will be held and a banquet will be given in the evening by the members of the faculty of the medical department to the alumni.

FOREIGN

Memorial Meeting for Pflüger in St. Petersburg.—A special meeting of the national medical Russian association was held recently at St. Petersburg in memory of the late Professor Pflüger of Bonn, the physiologist. The address was made by Professor Pawlow.

Wölfler Festschrift.—The pupils and friends of Professor Wölfler of Prague presented him last month with a *Festschrift* in the form of a special volume of the *Beiträge zur klinischen Chirurgie* containing the works of his pupils. The occasion was his sixtieth birthday and the twenty-fifth anniversary of his incumbency of the chair of surgery.

Circulation of German Medical Weeklies.—Some interesting data are found in the current number of the Press Directory issued by a leading advertising agency in Germany. It states that there are 352 periodicals published in Germany, Austria and Switzerland on the medical and allied sciences. The *Münchener medizinische Wochenschrift* heads the list of German medical journals with a certified circulation of 12,000 copies. This is followed by the *Deutsche med. Wochenschrift* with a circulation of 9,500, the *Medizinische Klinik* with circulation of 9,000, and the *Berliner klinische Wochenschrift* with a circulation of 4,000. In Austria the *Wiener medizinische Wochenschrift* has a circulation of 3.000, and the *Wiener klinische Wochenschrift*, a circulation of 2.400. The total circulation of these six great weeklies is thus stated to be 39,900.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 7, 1910.

Women as Resident Medical Officers in General Hospitals

The question whether women should be eligible for appointment as resident medical officers in general hospitals, where they will have to deal with all sorts of emergency cases in male patients, such, for example, as retention of urine by stricture, has been a burning question for some time in this country. Recently the board of one of the greatest of the provincial hospitals, the Manchester Royal Infirmary, decided not to appoint medical women to these posts—a decision which has aroused considerable criticism from both lay and medical sources. A meeting of the Medico-Ethical Society of Manchester was held to discuss the subject. Some 20 medical women of the Northern Association of Medical Women attended by invitation. The case for the appointment of women was ably stated by Dr. Margaret Smith, inspector of midwives in Manchester. She outlined the history of medicine as a profession for women in this country since the admission of the first woman to the Medical Register in 1859. The facilities now offered to women for the study of medicine were now so good, she said, that on the whole they compared favorably with those of men. But after graduation their opportunities were inferior. However, they were improving. Women's attempts to get experience in the form of general hospital work were met with such objections as "lack of accommodation," "woman's inability to agree with ward sisters," objections which were put at their true worth in one word—prejudice. The questions should be: Is woman a fit and proper person for appointment to a resident post in a general hospital? Does she possess the same qualities as entitle a man to hold the position? The answer depended on three things: record of work, experience and personal character. As to work, women's college records were often just as good as men's; as to experience, they were handicapped for senior posts, but for junior posts they had equal experience with men—namely, *nil*; as to character, women had the same common sense, kindness and physical capacity for work as men. Women had been found to get on with their colleagues just as well as men —neither better nor worse. It was personality, not sex, which mattered. It was said that women themselves object to a woman doctor, but they accepted them in practice. The argument that for a woman to attend a male was shocking to male modesty cut both ways. Ability and special skill were, after all, the whole basis on which medical attendance, by man or woman, depended. Sir William Sinclair, the well-known gynecologist, president of the society, insisted that in admitting women to medical schools they were necessarily admitted to all positions a male medical student or doctor could occupy. Although the meeting was well attended, there was no debate, for the reason that no one could be found to oppose the proposition. The immense change of opinion which has occurred is shown by the fact that the celebrated physician, the late Sir William Jenner, resigned from the council of the British Medical Association rather than agree to the admission of women to the association. This change is only a particular case of a more general one—the great advance of the movement in favor of the rights of women, i. e., the removal of all sex disqualifications.

The Cold Storage of Vaccine Lymph

The Medical Officer of the Local Government Board has issued an important report on the cold storage of vaccine lymph. During the past 12 months 400,820 charges of glycerinated calf lymph were issued from the board's laboratory (which supplies all the public vaccinators of the country). In primary vaccination the "case success" was 99.4 per cent., and the "insertion success" was 95.9 per cent., which shows that a high quality of lymph was maintained. Some time ago a preliminary report was published by Dr. Blaxall and Mr. Fremlin on the results of sustained subjection of glycerinated calf lymph to temperatures below freezing point. The present report contains further information on lymph kept in cold storage for periods of 2 years and 6 months, respectively. The 2-year-old lymph was found to be free from extraneous organisms and to give a "case success" of 97.8 per cent. and an "insertion success" of 91.4. Since July, 1908, the lymphs collected from two calves have been divided into two portions, one being placed in cold storage for 6 months and then issued to public vaccinators, the other being issued without being subject to a temperature below freezing. The former gave a case success of 99.6 per cent. and an insertion success of 96.7; the latter was issued 6 to 8 weeks after it was taken from the calves and gave a case success of 99.5 per cent. and an insertion success of 96.5. Thus the results in the two cases were practically identical, showing that the cold storage had not impaired the activity of the lymph. This result is important, as it shows that by cold storage a supply of lymph may be stored to meet any sudden expansion of demand which may arise by reason of an epidemic of smallpox.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 28, 1910.

Annual Meeting of the Society for Internal Medicine

As usual the Kongress für innere Medizin was held in the latter part of April at Wiesbaden under the presidency of the Berlin clinician, Professor Kraus. As about 180 papers were on the program and only four days available for the meeting, ten minutes or less was assigned for the reading of most of the papers, which consisted of mere abstracts. To be sure, this brief time is not favorable for thoroughness, but no other method is practicable to dispose of the large number of papers. With the new regulations which were adopted at this meeting it will be possible in future to limit the number of papers and so diminish the confusion. The reading of papers before the congress which have been already presented or published in the journals—which has hitherto frequently happened—will thus be prevented. Furthermore, papers which are deemed unsuitable will be rejected by the decision of the executive committee. Moreover, the time for the announcement of papers is limited, so that no papers will be received later than two to three weeks before the beginning of the meeting. It would be very desirable if by these means the excess of papers should be diminished; possibly also the general publication of German works will be favorably influenced.

SPECIFIC DIAGNOSIS AND TREATMENT OF TUBERCULOSIS

This was the principal topic of this year's session; it was presented by Professor Schütz, professor in the Berlin veterinary school and for some years a co-worker with Robert Koch, and by Professor Penzoldt of Erlangen. According to Schütz the subcutaneous injection of tuberculin gives only 2 to 3 per cent. of failures in the diagnosis of bovine tuberculosis. The other tuberculin diagnostic methods have proved inadequate. Bovine tuberculosis has constantly increased in Germany. In 1904, 17.88 per cent. of the cattle slaughtered in the abattoirs were tuberculous, but in 1907 the number was 21.21 per cent.; from 50 to 70 per cent. of the older milch cows may be regarded as tuberculous. With reference to the treatment of bovine tuberculosis, the method employed by Bang in Denmark, of feeding calves only with boiled milk, has not proved efficient; neither has the method of preventive injections of Behring's bovovaccine or Koch-Schütz' tauroman given satisfactory results. According to the German law regarding infection of cattle, enacted in 1909, all cattle with open tuberculosis are slaughtered and compensation made to the owners. In this way Germany loses annually over $3,600,000.

Penzoldt said in regard to diagnosis that Bloch's method of inoculation of animals by injection into the skin of the abdomen and slight crushing of the inguinal glands had shortened the time required to obtain reliable results. A positive cutaneous reaction he regards as a sure indication of tuberculosis, but the negative reaction is often unreliable. He does not consider any one preparation of tuberculin as unconditionally the best; all preparations are founded on the same principle. He advises to begin with 0.01 c.c. and increase by Sahli's method, avoiding any severe reaction. A rapid progress to large doses is dangerous and, on the other hand, too small doses give no results. The success with tuberculosis serums is inferior to that obtained by the tuberculin treatment. Hygienic and dietetic measures should be thoroughly enforced. Penzoldt has employed a careful tuberculin treatment for twenty years and is well satisfied with the results. A decisive opinion regarding the value of tuberculin cannot yet be given, but the remedy is surely given a higher rank at present than fifteen years ago. This view was supported by most of the following papers and discussions. In addition there were some who gave unlimited praise to the remedy and others who denied it all curative power. Professor Jochmann recommends, in accordance with his experiments made in the Rudolf Virchow hospital under the direction of Koch, to begin with old tuberculin and to continue with bacillus emulsion. Strong reactions are to be avoided by using tuberculin that is derived from bacilli which have been cultivated on media that are free from albumin. The best result Jochmann obtained was in glandular tuberculosis. Professor Sahli repudiates the diagnostic tuberculin reaction on account of its danger. Prof. F. Klemperer recommends immunizing with bovine tubercle bacilli in man.

Payr of Greifswald reported some observations on a peculiar stenosis of the colon at the hepatic and splenic flexures caused by abnormally sharp kinks and adhesions. With acute occlusion from this cause the picture of mechanical ileus may be produced, and the chronic condition may lead to the assumption of a carcinoma of the colon. In acute cases subcutaneous injections of atropin are of service, but in very severe cases and chronic cases operation is indicated. Payr has operated 27 times within six years with 2 deaths in quite desperate cases.

SECONDARY ANEMIAS

A very interesting report was made by Professor Gerhardt of Basel on the "Origin and Treatment of Secondary Anemias." A large part of the discussion was devoted to the importance of oleic acid as a cause of secondary pernicious anemia, particularly that due to the bothriocephalus. No concord of opinion was reached. Professor Schauman of Helsingfors emphasizes the importance of constitutional taints for the development of bothriocephalus pernicious anemia. Therapeutically great reliance is still to be placed on treatment by arsenic and iron. The transfusion of healthy blood has not produced any positive success, and the same may be said of serum treatment.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, May 10, 1910.

Distribution of Tuberculosis Among Vienna Children

In a report of the board of health some interesting data as regards the presence of tuberculosis among school children in Vienna are given. There were altogether 220,000 children between the ages of 6 and 16 in the Vienna elementary schools, of whom only 16,000 were examined. They comprised the poorer classes in the workmen's districts and the figures given are therefore selective. A constant increase in tuberculosis can be noted with increasing age. Children 6 to 10 years old were found suffering from one-sided lung disease in 10 per cent.; on both sides in 4 per cent.; and from bone tuberculosis in 3 per cent. The ages of 10 to 10 showed 12 per cent. disease of one lung, 3 per cent. of both lungs, and 5 per cent. of other tuberculous infections, while in the ages 14 to 16 practically the same conditions prevailed. The mortality from tuberculosis increased from 3 per cent. of all deaths in the first years to 12 per cent. of all deaths of the age 14 to 16. For comparison, it may be stated that all deaths from measles, whooping-cough, scarlet fever and diphtheria combined also amounted to a little over 12 per cent. The grave danger to the public disclosed by these figures cannot be overestimated. The private societies engaged in fighting tuberculosis of children are absolutely unable to grapple satisfactorily with the problem, and state help is at present negligible. The appointment of school doctors is a mere trifle, unless the parents are enabled to make their sick children healthy. This is the aim of the report.

Report of the Antirabies Institute in Vienna

The institute for antirabies inoculations in Vienna has recently published its report for 1907 and 1908; the following figures are worth mentioning: During the period covered, 955 persons applied for treatment and 148 others, who came to the institute for the same purpose, were found to be in no need of prophylactic injections. Seventy-seven per cent. of all the persons treated had been bitten by dogs undoubtedly suffering from rabies; 15 per cent. were bitten by animals which showed suspicious symptoms, but in which diagnosis was not confirmed by post-mortem findings, and the remainder were bitten by dogs against which suspicion was aroused from the presence of rabies in the vicinity. Altogether, 429 children, 366 men and 160 women were treated. Only such persons were received as had suffered a bleeding injury from the bite. The mortality during the two years was 0.7 per cent. (6 deaths), and if all cases treated in the institute are considered, the mortality is the same, 0.7 per cent. of 3,572 (26 deaths). Another 13 persons died out of this number during the time of observation, but these deaths were due to other disease than rabies. The number of deaths from rabies in the entire empire during the two years was 20 (13 persons not inoculated, 6 inoculated, one died during treatment). Since the number of persons injured by animals is unknown, a comparison between cases of persons inoculated and not inoculated is impossible. The rule in the institutes is to keep the patients in hospital, sending them home only after a definite course of injections has been made. In some cases, home treatment is given. Of the number mentioned above, 248 were treated as out-patients. There are in this country only three institutes of this kind, the largest being in Vienna, and the public are quite aware of the danger incurred by being bitten by a dog, as the number of persons showed who applied for treatment simply out of fear of rabies.

Meeting of Austrian and Hungarian Pediatrists

A very interesting and novel congress took place recently (April 30 to May 1) in Vienna, when Hungarian and Austrian pediatrists held a common session, a thing thought impossible before from political reasons. The shortness of time did not permit this first meeting to be as successful as it might have been, since so many papers were brought in at the very last moment that the time for reading had to be limited. Professor Chrobak, after welcoming the congress, explained its aim, and showed how political differences of opinions made a halt before science. Professor Escherich spoke about the indications and results of specific treatment of infantile tuberculosis, which was extremely important in producing so high a mortality. Docent Dr. Preisich of Budapest detailed the clinical and pathologic findings in tuberculosis in infancy; Professor Kraus read a paper on the use of tuberculin in infants. Professor von Bokay of Budapest detailed his observations on chronic hydrocephalus, which he said could be influenced materially by repeated punctures of the brain ventricles; the metabolism of childhood was discussed by von Reuss, Neurath, Fuchs, and Necker, and the discussions following these papers showed that much good could be obtained from such exchange of ideas. It was resolved to make such common meetings a standing institution.

Pharmacology

CHINOSOL

Report of the Council on Pharmacy and Chemistry

Chinosol, a product for which the Parmele Pharmacal Company is the American agent, was the subject of a Council report which appeared in THE JOURNAL, Jan. 25, 1908. The company took exception to the findings in the report and requested that Chinosol be reexamined. The request was granted, and the referee who made the first bacteriologic examination of the product—and who in this report will be called Referee I—reinvestigated Chinosol. An independent examination also was made by an expert (Referee II) who was not a member of the Council. The reports of Referees I and II were submitted to a third referee (Referee III), who in turn transmitted them to the Council. Copies of the reports of the referees were also sent to the Parmele Pharmacal Company, which objected to certain of the findings. The report of Referee III, based on the reply of the company, and on the findings of Referees I and II, appears below. The objections raised by the company to the second report were replied to by the Council, and with its reply were sent the results of the investigations made in Europe by Schneider and Seligman and by Charles J. Martin which confirmed the findings of the Council. After considering this further evidence, the company modified its claims and the Council accepted Chinosol for inclusion in New and Nonofficial Remedies.[1]

W. A. PUCKNER, Secretary.

The Council on Pharmacy and Chemistry took up the consideration of Chinosol on its own initiative and published its report in THE JOURNAL, Jan. 25, 1908. The Parmele Pharmacal Co. requested a reconsideration of Chinosol on the ground that the preparation examined which bore the label of Franz Fritzsche & Co., Hamburg,[2] did not come from them, since it did not bear their label. The firm also submitted bacteriologic reports by Dr. W. H. Patterson and by the Lederle Laboratories of New York with findings that differed in certain important respects from those obtained by the investigation made at the instance of the Council, and expressed the desire to conform to the rules of the Council in the exploitation of the preparation. In its letter to the Council the Parmele Pharmacal Co. laid special stress on the report of the Lederle Laboratories, and stated that it felt confident "that your referee will find our tests confirmed in every instance and will not find confirmed his own tests, if he will use Chinosol bearing our label."

Assuming that there might be a difference in the two brands of Chinosol as claimed, and considering the fact that the company had been willing to alter, and had somewhat altered, its advertising matter, removing some of the objectionable features and had accepted to some extent the criticism of the Council's first report, the Council granted reconsideration, and Chinosol was resubmitted to the original referee, who will be called Referee I in this report. Referee I having completed his reexamination of Chinosol,[3] the product at the request of the company and under revised rules of the Council, was submitted also to a new referee, not a member of the Council, who acted essentially in a professional advisory capacity to the Council, and who will be called Referee II in this report.[3] The reports of both referees having been considered by the Council and preliminary action taken by it, the Parmele Pharmacal Co. was, in accordance with the rules of the Council, given an opportunity to examine the *findings* of the Council and the reports of its referees, and the company submitted statements in reply. These statements and the findings of its referees having been carefully considered, the Council reached the following conclusions in regard to the questions concerning Chinosol:

AN INTENSE ANTISEPTIC

In its first report the Council found that Chinosol "does possess considerable antiseptic action and that it is in this respect superior to carbolic acid. On this point the statements in the circulars[4] are essentially correct." The findings of both our referees in the present investigation confirm this conclusion. As regards *Staphylococcus pyogenes aureus* and *Bacillus typhosus*, Chinosol is a better antiseptic than carbolic acid and equivalent to mercuric chlorid as an antiseptic. The findings of our first report and the claims of the Parmele Pharmacal Co. on this point are thus confirmed. [It should be stated that Chinosol as now marketed is free from 30 per cent. inert matter—potassium sulphate—and is, therefore, proportionately stronger than the brands examined by the Council's experts.]

A VERY POOR GERMICIDE

While there was no dispute concerning the antiseptic action of Chinosol, the findings of the Council in regard to its germicidal action disagreed fundamentally with the claims made for it in this respect by the Parmele Pharmacal Co. and with the findings of their experts. While the company had withdrawn its most extravagant claims concerning the germicidal power of Chinosol, it still claimed in the report of the Lederle Laboratories that Chinosol was superior to carbolic acid, and that in its action on *S. p. aureus* it was, in weak acid broth, "stronger than bichlorid" (not under other conditions), and that in general Chinosol resembled more nearly the strength of bichlorid of mercury than it did that of carbolic acid. The three investigations made by our referees (two by Referee I and one by Referee II) lead to the definite conclusion that in aqueous as well as in acid broth Chinosol is much less effective as a germicide than is carbolic acid and vastly inferior to mercuric chlorid.[5]

[NOTE: The Parmele Pharmacal Company has now withdrawn its claim that Chinosol has superior germicidal power to either phenol (carbolic acid) or mercuric chlorid.]

DISTINCTION BETWEEN ANTISEPTIC AND GERMICIDE

The striking difference in these results from those reported by the Lederle Laboratories appears to be due essentially to the care taken by our experts to exclude the possibility of *antiseptic* action being mistaken for *germicidal* action (see the reports for details; the precaution consisted simply in inoculating *larger* volumes of culture medium in order to overcome by dilution the intense antiseptic powers of Chinosol). The validity of such precautions appears to be above question—the principle has been recognized and accepted by such authorities, for instance, as Martin and Chick, Riedel and Walker, and others in the field.

> *Martin and Cooper's Results:*—A letter received from the Parmele Pharmacal Company was handed to Referee II for an opinion, inasmuch as the letter quoted the results of Chick and Martin and attempted to show that these favored the stand taken by the Parmele Pharmacal Co. It was seen at once that the results of Chick and Martin in no wise supported the views of the company, but lest any error be committed in interpretation, Referee II wrote to Professor Charles J. Martin, F. R. S., director of the Lister Institute of Preventive Medicine, London, asking for an expression of opinion of the results of his own and Dr. Chick's work in the light of the quotation of the Parmele Pharmacal Co. Professor Martin's attention was also drawn to the fact that in their experiments with Chinosol the *antiseptic action* had possibly been overlooked.
>
> This letter was acknowledged and in a second letter Professor Martin wrote that Mr. A. E. Cooper, working with him, had repeated Referee II's observations on Chinosol and had confirmed the referee's results. Professor Martin expressed regret that he had omitted to ascertain in his first work (with H. Chick) whether Chinosol exhibited inhibition in such great dilution; a large number

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[1] See page 1789. See also editorial comment, this issue.

[2] The Parmele Pharmacal Co. thought at the time the preparation used had been repacked by some American drug-house other than their own, and did not intend to question the product of Franz Fritzsche & Co.

[3] The reports of Referees I and II and the protocols of Cooper and Martin will appear in the reprint of the entire matter, which will be mailed on request if a stamped addressed envelope is sent. The matter will appear in full in the annual reports of the Council on Pharmacy and Chemistry.

[4] The circulars of the Parmele Pharmacal Co.

[5] In their work on the germicidal power of corrosive sublimate, Chick and Martin (Jour. Hyg., 1908, viii, 654), *in order to avoid* the further action of mercury carried over in combination with the bacteria remove it with hydrogen sulphid. As such a subsequent exposure to hydrogen sulphid—which reduces the germicidal efficiency of bichlorid—would, except in the case of disinfection, possibly of fecal discharges, not occur in *practice, this behavior* does not affect the efficiency of corrosive sublimate as a practical disinfectant ("The value of corrosive sublimate as a practical disinfectant remains unassailed."—Chick). The hydrogen sulphid treatment was therefore not used by our referees. It is quite different with Chinosol, whose antiseptic action can be *overcome* by subsequent dilution—such as is quite possible or even probable in practice.

of organic disinfectants had been examined by them without their coming across this phenomenon. At the time too, they were not concerned with determining the germicidal value of Chinosol.

The following tables are an abridgement[2] of the work and results of Mr. E. A. Cooper and Professor Martin:

SERIES I.

Organism used: *Staphylococcus pyogenes aureus*, broth culture 24 hours old. Several drops of this culture were deposited in the dilutions of phenol (carbolic acid) and Chinosol, and by means of a special pipette one drop containing 0.013 c.c. was carried over from each dilution to a tube containing 10 c.c. of broth and incubated.

Apparent Germicidal Results With Chinosol

Agent.	Dilution Strength.	Time of Exposure in Disinfectant (Growth Results). 15 Min.	30 Min.	Ultimate Dilution of Agent in 10 c.c. of Broth.
Phenol	7:1000	+	+	1:109,890
	9:1000	+	—	1: 85,470
	10:1000	—	—	1: 76,923
Chinosol ...	80:1000 up to 200:1000	— —	— —	1: 9,615 up to 1: 3,846

SERIES II

To eliminate the inhibitive or antiseptic action of Chinosol on *S. p. aureus*, one drop (0.013 c.c.) of the contents of the first broth tube was removed and deposited in a second one containing 10 c.c., and incubated.

Germicidal Action Absent

Agent.	Dilution Strength.	Time of Exposure in Disinfectant (Growth Results). 15 Min.	30 Min.	Ultimate Dilution of Agent in 10 c.c. of Broth.
Chinosol ...	80:1000 up to 200:1000	+ +	+ +	1:7,396,150 up to 1:3,958,460

Similarly using *Bacillus typhosus*, it was demonstrated that the antiseptic action of Chinosol was considerably less than on *S. p. aureus*, and germicidal action was absent.

It is, therefore, clear that what Chinosol could not effect on *S. p. aureus*, in strengths of 200:1000 parts, phenol (carbolic acid) accomplished in 10:1000 parts; this effectively demonstrates the superiority of phenol as a germicide over Chinosol.

Schneider and Seligman's Work:—Of particular interest and importance in this connection is the work of Schneider and Seligman in the laboratory of Proskauer, *Institut für Infektionskrankheiten*, Berlin (*Ztschr. f. Hyg. u. Infectionskrankh.*, 58, 412-40). These investigators recognized clearly the importance of *avoiding the mistaking of antiseptic action for germicidal action* in the examination of disinfectants, and write as follows concerning Chinosol: "With Chinosol also, to which a disinfecting power equal to that of corrosive sublimate is ascribed, we obtained poor results by the 'thread method.' Whereas, for instance, only a 10 per cent. solution of Chinosol was able to kill within an hour the staphylococci dried on the threads, the ordinary method of transfer of the mixture of bacteria and disinfectant in the culture medium gave the false appearance of killing the bacteria in approximately the same time already in 1 per cent. to 2 per cent. solutions. That this last result is due only to antiseptic action ('*Entwickelungshemmung*') need not be especially emphasized." Their results (*S. p. aureus* being used) are so characteristic of the question in dispute that they are reproduced here:

TABLE I

Antiseptic Action Not Avoided

Minutes	5	10	15	20	25	30
2 per cent............	—	+	—	—	—	—
3 per cent............	—	—	—	—	—	—

TABLE II

Staphylococci Threads; Antiseptic Action Avoided

Minutes	10	20	30	40	50	60
3 per cent............	+	+	+	+	+	+
5 per cent............	+	+	+	+	+	+
7 per cent............	+	+	+	+	+	+
10 per cent...........	+	+	+	—	—	—

The results obtained in Table I were obtained without using the precaution to prevent antiseptic action; those obtained in Table II are the results found when the threads were washed with dilute alkali to remove adhering Chinosol before transferring them to nutrient media. In another set of experiments carbolic acid was used, also with *S. p. aureus*.

TABLE III

Antiseptic Action Not Avoided

Minutes	5	10	15	20	25	30
Phenol 1 per cent......	+	+	+	+	+	+
Phenol 1.5 per cent....	+	—	—	—	—	—

TABLE IV

Threads Washed with Dilute Alkali; Antiseptic Action Avoided

Minutes	5	10	15	20	25	30
Phenol 2 per cent......	—	—	—	—	—	—

The Council thus was obliged to confirm its original findings that while Chinosol is a powerful antiseptic, it is a very poor germicide, and the claims made for it in this respect must be rejected. It may be added that the Council has considered the question of physicians being given reliable information as to each of these properties a fundamental one.

ITS NON-POISONOUS CHARACTER

In the Council's first report the evidence of T. Weyl was quoted questioning the claim made that the use of Chinosol is free from the dangers of poisoning. Weyl's evidence and reliability having been questioned by the firm and experimental evidence by the Lederle Laboratories submitted contradicting his conclusions, the Council had some experiments bearing on this question carried out by its own expert.[6] It finds that in so far as guinea-pigs and rabbits are concerned Chinosol is devoid of toxic power. The authority quoted in the first report is therefore found to be unreliable and Chinosol must be considered non-toxic.

CHEMICAL COMPOSITION OF CHINOSOL

In 1899 Rost-Sonntag showed (*Chem. Zentralbl.*, 1899, ii, 396, and *Arb. a. d. k. Gsndhtsamte*, xv, 288-301), that Chinosol was a mixture. In its first report the Council confirmed the conclusions of Brahm, working in the physiologic institute of the University of Berlin, that Chinosol is not a sulphonate of oxyquinoline, as represented by the promoters of Chinosol, but a double salt or mixture of its sulphate with potassium sulphate. The result of these findings was accepted by the Parmele Pharmacal Co. and the correction made in its subsequent publications; the original error, according to the firm, was due to its accepting the statement of the U. S. Dispensatory, i. e., that Chinosol is an oxyquinoline sulphonate as authoritative in the matter. Chinosol is now no longer marketed as the double salt or mixture of oxyquinoline sulphate and potassium sulphate, but as pure normal (neutral) oxyquinoline sulphate $(C_9H_7NO)_2H_2SO_4$.[7]

ANTISEPTIC ACTION VS. GERMICIDAL ACTION

It seems of the greatest importance to the Council that antiseptic power be not mistaken for germicidal power and that physicians should be correctly informed as to these properties of disinfectants[8] recommended to them, so that they may decide for themselves in every given case which action they wish to produce. This seems especially important in the case of a substance, which, according to the findings in three expert examinations on the part of the Council, has very poor germicidal power, not at all comparable with that of bichlorid of mercury, as had been claimed by the Parmele Pharmacal Co. In view of this the Council ordered the publication of this report and refused to accept Chinosol for admission to "New and Nonofficial Remedies" until the claims made for its germicidal action had been modified in accordance with its findings.

[Note: The Parmele Pharmacal Company has re-submitted Chinosol with the advertising matter revised in accordance with the findings of the Council. All objectionable claims having been eliminated the Council reconsidered the product and accepted Chinosol for admission to New and Nonofficial Remedies.]

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[6] These appear in the report of Referee II; see footnote 2.

[7] Zernik: Apoth.-Ztg., 24, No. 63, p. 568.

[8] For example, in the disinfection of hands, instruments, linen or silk threads, etc., germicidal and not antiseptic power would be desired. Chinosol solution as dilute as 1:1000 had been recommended for these purposes. A glance at the tables, either of the referees or of Schneider and Seligman, will show the danger of assuming that complete disinfection is accomplished by such solutions in a reasonable length of time.

ASPIRO-LITHINE

Aspiro-lithine is another comparatively new example of the custom of proprietary manufacturers in putting forward old drugs under a new name and with them bidding for the favor of physicians. An inquiry has been received concerning this mixture. It is prepared by McKesson & Robbins and is said to contain in each tablet 5 grains of acetylsalicylic acid (aspirin) and 2½ grains of acid citro-tartrate of lithium. It is recommended for all the purposes for which acetylsalicylic acid is commonly used, and on account of the lithium added is claimed to have much greater virtues than either of these drugs alone or of both combined.

We had hoped that the time had passed for reputable houses to employ such time-worn methods, but probably they will not stop so long as physicians encourage them by continuing to use such preparations. Acetylsalicylic acid is a good drug, whose value is pretty well known. It is further known that lithium salts do not possess any great medicinal virtue. Just what acid citro-tartrate of lithium may be is hard to tell, for chemistries do not recognize such a substance. The name presumably is intended to hide the real nature of the preparation.

But if there be any advantage in combining lithium salts with acetylsalicylic acid in a prescription, it is a simple proposition and requires no great skill, either on the part of the physician who writes the prescription or on the part of the druggist who puts it up, and such mixtures as aspiro-lithine, with the exaggerated claims made for them, should be avoided in the physician's prescribing.

Correspondence

Medical Biographical Data Wanted

To the Editor:—In my Cyclopedia of American Medical Biography, now practically ready for press, there are a few dates still lacking.

Douglas, Richard, Tennessee, parentage and birth place.
Faget, Jean C., New Orleans, date of death.
Pallen, Moses, St. Louis, parentage and birth place.
Denison, Charles, Denver, parentage and birth place.
Guthrie, Samuel, Chicago, date of death.
Van Dyck, Cornelius, Syria, date of birth and death.
Litton, Abraham, Tennessee, date of birth and death.
Gregory, Elisha H., St. Louis, date of death.
Burroughs, Richard B., Florida, date of death.
Cheever, Aug. C., Boston, date of death.
Eve, Joseph A., Georgia, wife; death date.
Entrikin, F. W., Ohio, date of death.
Etheridge, J. H., Chicago, date of death.
Howard, R. P., Canada, date of birth.
Gilmer, George, Virginia, date of death.
Martin, Solomon C., St. Louis, date of death.
Cheever, Abijah, Boston, date of birth and death.
Jones, John, New York City, date of death.

If any readers could help me with these they would receive the warm thanks of,

Yours faithfully,
HOWARD A. KELLY, Baltimore.

Pituitary Extracts in Hay Fever, Asthma, Etc.

To the Editor:—The period of so-called "rose cold" or "vernal hay fever"—i. e., vernal, pollenogenic, angioneurotic edema of the air passages—is approaching, or with certain patients, here. Referring to my observations in 1898 concerning the use of adrenal preparations in this disorder and in asthma (since confirmed throughout the world) I wish now to ask physicians to use preparations of the pituitary gland, and more especially of the infundibulum or posterior lobe. There are at least two, and possibly several, good commercial preparations now available.

From the recoveries which I have observed to follow their use in Quincke's edema, asthma, recurrent erythema and other angioneuroses, as well as their effects in "opening" the nasal passages, I should expect them to be superior to the adrenal preparations in all varieties of hay fever. The action is slower, but more persistent.

The pituitary extracts may be used both topically and systemically. While more effective by hypodermic injection, they also produce clinical results when administered by the mouth—another advantage over the adrenal extracts.

I shall be much obliged for reports by letter or publication of the experience of those adopting this suggestion.

SOLOMON SOLIS COHEN, Philadelphia.
1525 Walnut Street.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

VALUE OF TETANUS ANTITOXIN

To the Editor:—Has the efficiency of antitetanic serum in the treatment of tetanus been sufficiently demonstrated to merit its use in that disease with confidence of positive results?

C. A. ANDERSON.

ANSWER.—It has not been found that antitetanic serum has any particular effect on the symptoms of tetanus because these appear as the culmination of the disease when it is too late for anything to have much effect. As a prophylactic, however, antitetanic serum is markedly efficient, especially if accompanied with free opening of the wound and removal of foreign matter. It is important to prevent this foreign matter and the tetanus germs from being sealed up at the bottom of the wound, which often heals superficially. The efficiency of antitetanic serum has secured for it a position in New and Nonofficial Remedies and the Committee of the Section on Pathology and Physiology recommends its inclusion in the Pharmacopeia. The report of this committee appeared in THE JOURNAL April 23, 1910, page 1389.

SOIL POLLUTION AND DISPOSAL OF HUMAN EXCRETA

As further communications have been received concerning soil pollution and disposal of human excreta and wastes by the septic-tank method, about which a query and answer appeared in THE JOURNAL, April 23, an additional note on these subjects may be of interest.

In the weekly *Public Health Reports* of the U. S. Public Health and Marine-Hospital Service, April 29, Dr. C. W. Stiles has an article which may be obtained in reprint, on the subject of soil pollution and the sanitary privy, from which extracts are given below.

The importance of the prevention of soil pollution is apparent when it is remembered that diseases having their focus of infection in the intestinal and urinary systems, such as typhoid fever, hookworm disease, eelworm infection, tapeworms, Cochin China diarrhea, amebic dysentery, bacillary dysentery, etc., can be greatly reduced or eradicated by the prevention of such pollution. Dr. Stiles says that it is common knowledge that nearly all animals harbor parasites in their intestinal canals. The eggs are passed in the droppings and reinfect live stock; farmers have learned that animals kept on the same pasture year after year will not thrive on this account. Human beings are also infected with many parasites, and where no sewer systems exist soil pollution must be prevented by the disposal of human dejections in sanitary privies or by the septic-tank method.

Dr. Stiles' paper, while covering much the same ground as the article in THE JOURNAL of April 23, goes more fully into details as to the location and construction of sanitary privies and disinfection and disposal of the excreta. The article gives illustrations of such privies, using a receptacle in the form of a can or tub, with top-soil, lime, water and oil, and other materials for deodorizing, disinfecting or destroying the excreta. Full directions are given for building such a privy. It is a good plan to have a double set of tubs so that one set can be removed, treated with the disinfectant, covered and allowed to stand for a week before emptying to allow time for the destruction of the germs, or to allow fermentation to take place when no disinfectant is used. Dr. Stiles says that until it is determined with certainty how long parasites and germs or their spores may live under the various methods of treatment of the excreta mentioned, it is better to bury all human discharges at least 300 feet away and down hill from any well or spring. It would be better to burn such material, and in one instance this was done in the following way: The privy vault was built of cement and the building above hinged to the foundation. Kindling and straw were placed in the bottom of the vault, and each week the upper structure was tipped over—away from danger of catching fire—oil thrown into the vault and the material burned up. If used for fertilizer it should be plowed under and not used on crops of vegetables which are to be eaten raw.

The vacation season will soon be here and many people will spend the summer in temporary residences or camps. The matter of the disposal of waste is important. The human excrement may be disposed of by the dry-earth method already described. Kitchen slops attract flies and afford breeding-places for mosquitoes. A simple and inexpensive way to dispose of this form of waste is to dig a hole in porous earth three feet deep, with short tunnels running off from each side. The pit may then be filled with broken rock, sticks and brush and covered with a top mat of pine needles or other finely divided material. Coarse refuse is screened out and burned in the camp fire each day and the rest of the slops will take care of themselves in the slop pit without odor or inconvenience. The pit should be surrounded by a frame covered with fine mesh cheese-cloth. Dry garbage is disposed of most effectively by frequent burning.

The septic-tank process of disposal of sewage depends on the breaking down of the solid, organic matter of the sewage into simpler substances by the action of anaerobic, putrefactive or liquefying bacteria. It has been found that from 50 to 75 per cent. of the solid matter is destroyed by the process, and where the effluent is discharged into a stream twice as much septic as raw sewage will be received before the point of pollution is reached which will cause a nuisance. The effluent may also be discharged into contact beds, where it is oxidized by aerobic bacteria or into the soil through subsurface pipes.

The details of the process may be understood by describing the construction and operation of a septic tank designed for use by private individuals having in their houses a gravity, compressed-air or other water-supply system. This description, as well as the notes on the disposal of camp garbage, is from the March, 1910, *Bulletin of the California State Board of Health*. It has been found that the bottom of the tank should have at least one square foot of surface for each person in a family. It may be made of either concrete or wood, 4 feet deep and 4 feet wide and of sufficient length to provide the proper surface capacity. It should be located some little distance from the house, connected therewith by a 4-inch vitrified drain tile, which should enter at the top and continue at a right angle to within a foot of the bottom. The outlet pipe on the opposite side of the tank should be of 2-inch tile, located 2 feet from the bottom. The tank may be buried in the ground and should perhaps be covered and have a small vent-pipe in the top. A tight cover is not essential. A baffle or partition 2 feet high, running the full length of the tank should be placed on the bottom 1 foot or less from the side of the inlet, and another suspended edgewise from the top of the tank an equal distance from the side of the outlet and reaching within a foot of the bottom. These baffles insure a uniform distribution of the sewage. This completes the tank, except that the outlet should be provided with a galvanized iron weir of one gallon capacity connected with the outlet tile by means of a galvanized iron pipe, permitting a continuous outward flow. The outlet pipe should be continued into a surface contact bed, a stream, or by loose-jointed branched tile, having a total length of at least 200 feet underneath the surface to conduct away the effluent. Subsurface irrigation is successful only in porous soil. This tank will take care of sewage from the toilet, bathroom, kitchen and the laundry-tubs.

The sewage flows from the house into the septic tank and is held there by the outlet weir for ten or twelve hours. During this time the sewage is worked over by the anaerobic bacteria and broken up, the heavy, inorganic portions sinking to the bottom, the lighter portion rising to the top and forming a feathery mat. but most of it is broken up into gases and materials which dissolve in the water and are carried off. A tank with sufficient area to work successfully need not be cleaned of sludge for three or four years. This tank will cost from $25 to $30. This method is applicable to small cities or towns having a sewer system, and is successful where sufficient area of tankage is provided. The effluent, however, must be discharged into streams or be treated by chemical or contact bed methods.

The Public Service

Medical Department, U. S. Army

Changes for the week *ended May 21, 1910*:

Long, Charles J., dental surgeon, ordered to Fort Thomas, Rhode Island, *for duty*.

The following named officers of the Medical Corps will report in person, June 20, 1910, to Lieutenant Colonel Henry P. Birmingham, Medical Corps, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination to determine their fitness for promotion: Majors Henry D. Snyder, Philip C. Bates, Allen M. Smith, Joseph T. Clarke, Merritte W. Ireland, Henry C. Fisher, Henry A. Shaw, Francis A. Winter.

Fauntleroy, P. C., *major*, granted 10 days' leave of absence.

Vaughan, Victor C., 1st lieut., M. R. C., will proceed from Ann Arbor, Mich., to this city, for the purpose of delivering the address to the graduating class at the Army Medical School on May 31, 1910, and on the completion of this duty will return to his home.

Phalen, James M., *capt.*, *ordered* to Columbus Barracks, Ohio, for *duty*.

Love, Albert C., capt., will repair to this city and report in person to the Surgeon General of the Army, for duty in his office.

Duncan, William A., *capt., relieved from duty* at Army General Hospital, San Francisco, and from *observation* and treatment, Walter Reed General Hospital, Washington, D. C., and ordered to Vancouver Barracks, Wash., for duty.

Cutliffe, William O., *1st lieut.*, M. R. C., granted leave of absence for 1 month.

Miller, Albert L., 1st. lieut., M. R. C., relieved from temporary *duty at Fort Robinson*, Neb., *and* to return to station at Fort Meade, S. Dak.; granted 24 days' leave, *to take effect about* May 20, 1910.

Hoff, John Van R., col., *detailed as* instructor in military hygiene at the Camp of Instruction for infantry officers of the organized militia, State *of Pennsylvania*, to be held *at* Mt. Gretna, Pa., commencing May 17, 1910.

Pipes, Henry F., capt., is assigned to the command of the one-half of Co. C, Hospital Corps, to participate in the military tournament at Nashville, Tenn., June 19 to 26, 1910, the camp of instruction at Chickamauga Park, Ga., July 5 to Aug. 2, 1910, and camp of instruction at Fort Benjamin Harrison, Ind., Sept. 1 to 30, 1910.

Bradley, John R., 1st *lieut.*, M. R. C., *ordered to* duty with Battery E, 5th Field Artillery, from Fort Leavenworth, Kan., to Sparta, Wis.

Fauntleroy, P. C., reports on 10 days' leave of absence.

DeLaney, M. A., capt., ordered to proceed to Philadelphia, on official business pertaining to the Medical Department.

The *following* assignments of officers of the Medical Corps to duty at the camp of instruction to be held at Gettysburg, Pa., during the month of July, 1910, *are ordered*: *Major* E. E. Parsons, *to command* stationary hospital; Major Charles R. Reynolds, to be medical inspector; *Captain George P. Pood, to be sanitary officer*, assistant to the medical inspector; Captain William B. Davis, to be sanitary officer, assistant to the medical inspector.

Banister, *John* M., col., granted 4 months leave of absence, to take effect about Sept. 1, 1910.

Harris, Jesse R., capt., ordered to the *Army General Hospital*, *San* Francisco, for observation and treatment.

Gunckel, George L., dental surgeon, reports *for* temporary duty at Fort Barrancas, Fla.

Medical Corps, U. S. Navy

Changes for the week *ended May 21, 1910*:

Kaufman, J. B., P. A. *surgeon*, *commissioned* passed assistant surgeon from March 24, 1909.

Dodge, A. H., asst.-surgeon, detached from the *California* and *ordered to continue treatment* at the Naval Hospital, Mare Island, Cal.

Halton, E. P., acting asst.-surgeon, appointed acting assistant-surgeon from May 16, 1910.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 18, 1910:

Trask, J. W., asst.-surgeon general, directed to proceed to Detroit and Lansing, Mich., and Harrisburg, Pa., on special temporary duty.

Woodward, R. M., surgeon, granted 7 days' leave of absence from May 15, 1910, under paragraph 189, Service Regulations.

Cobb, J. O., surgeon, leave *granted for 7 days from May 7, 1910*, amended to read 5 days from May 7, 1910.

Stimpson, W. G., surgeon, granted 20 days' leave of absence from May 15, 1910.

Anderson, John F., P. A. surgeon, directed to proceed to Mariette, Pa., *on special* temporary duty.

Ridlon, Joseph R., asst.-surgeon, relieved from duty *on the U. S. Revenue Cutter Seneca*, and directed to proceed to *Port Townsend*, Wash., and report to the commanding officer of the U. S. Revenue Cutter *Manning* for duty.

Gammon, William H., acting asst.-surgeon, granted 4 months' leave of absence, without *pay*, from May 15, 1910.

Hamilton, H. J., acting asst.-surgeon, granted 10 days' leave of absence from May 8, 1910.

Wallace, C. R., acting asst.-surgeon, granted 6 days' leave of absence from May 15, 1910.

Hobdy, W. C., P. A. surgeon, resignation *accepted by the* President, *effective May 31, 1910*.

Marriages

Milo Tripp Easton, M.D., to Miss Mary Helen Blackburn, both of Peoria, Ill., May 18.

Louis L. Hoff, M.D., Roxbury, Boston, to Miss Bessie Climan of Hartford, Conn., May 7.

James Thomas Taylor, M.D., to Miss Emily Louise Rankin, both of Reidsville, N. C., May 5.

Jesse W. Taft, M.D., Waukesha, Wis., to Miss Emma Leora Einsel of Toledo, Ohio, recently.

Charles Reuben McCreery, M.D., Tacoma, to Miss Bertha Frances Harris of Seattle, May 14.

Mortimer Elihu Embick, M.D., to Miss Katherine M. Scanlon, both of Chicago, at South Bend, Ind., May 17.

Craig Thomas Burns, M.D., Oklahoma City, Okla., to Miss Maud Staniland of Buffalo, N. Y., May 17.

George Cummings Albee, M.D., to Miss Mary Robinson West Reed, both of New York City, May 4.

William A. Hulbush, M.D., Philbrook, Mont., to Miss Bertha Isidora Elizabeth Krug of Fond du Lac, Wis., May 16.

John W. Kelly, M.D., to Miss Maude Josephine Wolfe, both of Springfield, Ill., May 7.

Deaths

Barton H. Potts, M.D. University of Pennsylvania, Philadelphia, 1891; a member of the American Medical Association, and American Otological Society and fellow of the College of Physicians of Philadelphia; resident physician to the Children's Hospital, Philadelphia, and Presbyterian Hospital, Philadelphia; laryngologist and aurist to St. Mary's Hospital; laryngologist to the Pennsylvania Training School for Feeble-Minded Children and aural surgeon to the dispensary of the Children's Hospital; laryngologist and aurist and chief of the nose and throat division of the German Hospital; died at his home in Philadelphia, May 8, from pneumonia, aged 41.

Alonzo Potter Neale Painter, M.D. Jefferson Medical College, 1890; a member of the Medical Society of the State of Pennsylvania, National Association of U. S. Pension Examining Surgeons; formerly president of the Armstrong County Medical Society, and physician of Armstrong county; staff physician to Kittanning General Hospital; secretary of the local pension board; died at his home in Kittanning, May 2, from the effects of a gunshot wound of the heart, self-inflicted, it is believed, with suicidal intent, while despondent on account of prolonged illness, aged 41.

George Henry Kenyon, M.D. University of Vermont, Burlington, 1866; a member of the American Medical Association and Association of Military Surgeons of the United States; surgeon of the United Train of Artillery for several years; made assistant surgeon-general of Rhode Island in 1883, and appointed surgeon-general of Rhode Island Militia with the rank of brigadier-general in 1894; treasurer of the local board of U. S. Pension Examiners; a veteran of the Civil War; died at his home in Providence, May 7, from nephritis, aged 65.

George Arnold Bellows, M.D. Detroit Medical College, 1881; a member of the American Medical Association; physician to the Seneca County (N. Y.) Almshouse from 1884 to 1892; health officer of Waterloo from 1882 to 1883; U. S. pension examining surgeon from 1887 to 1895; coroner of Seneca County for several years, and since 1891, a member and secretary of the board of trustees of Waterloo Academy; died at his home in Waterloo, May 10, from acute nephritis, aged 53.

Benjamin Alexander Cheek, M.D. University of Pennsylvania, Philadelphia, 1861; a member of the Medical Society of the State of North Carolina, and formerly president of the McDowell County Medical Society; surgeon of volunteers during the Civil War; died at his home in Marion in April, from nephritis, aged 72.

Peter J. McCourt, M.D. New York University, New York City, 1890; formerly a member of the American Medical Association; a member of the Medical Society of the State of New York, and a fellow of the New York Academy of Medicine; of New York City; a veteran, and crack shot of the Seventh Regiment, N. G. N. Y.; died at his home in Mount Vernon, N. Y., May 7, aged 68.

Henry Warren Fishel, M.D. University of Maryland, Baltimore, 1886; a member of the Medical Society of the State of Pennsylvania; formerly of Dillsburg; a member of the legislature from York county in 1894; ophthalmologist to the Messiah Home for the Children and Aged, Harrisburg; died at his home in that city, May 9, from cerebral hemorrhage, aged 58.

Jacob Imboden Leas, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1857; formerly surgeon of the Iowa Central Railroad at Neligh, Neb.; local surgeon and later general consulting physician and surgeon of the Fremont, Elkhorn and Missouri River Railroad at Chadron, Neb., and mayor of that city in 1891; died at his home, April 22, aged 75.

Richard Arthur DeKay, M.D. Bellevue Hospital Medical College, 1890; a member of the Medical Society of the State of New York; for several years health officer of the town of Rockland, and an inspector of the State Department of Health; was found dead in his office in Livingston Manor, May 3, from pulmonary edema following influenza, aged 46.

Emory Ellsworth Stover, M.D. State University of Iowa, Iowa City, 1898; a member of the Upper Des Moines, Iowa, and Southwestern Minnesota Medical societies; local surgeon of the Northwestern System, and health officer of Bigelow, Minn.; died recently at his home in that place from pulmonary tuberculosis, aged 45.

Tomlinson Fort Brewster, M.D. Jefferson Medical College, 1856; surgeon of the Fifty-fourth Georgia Regiment, C. S. A., during the Civil War; for several terms a member of the state legislature; superintendent of the Grady Hospital, Atlanta, for fourteen years; died in that institution, May 1, from nephritis, aged 76.

Walter S. Tingley, M.D. Medical College of Indiana, Indianapolis, 1884; for twelve years coroner of Campbell county, Ky.; formerly a resident and at one time health officer of Newport; pastor of the Christian Church of Harrisburg, Ind.; died in Speer's Memorial Hospital, Dayton, Ky., May 6, from nephritis, aged 63.

Wilson Lockhart, M.D. Jefferson Medical College, 1853; formerly superintendent of the Eastern Washington Hospital for the Insane, Medical Lake; at one time superintendent of the Indiana State Hospital for the Insane; died in his office in Seattle, April 28, from cerebral hemorrhage.

Paul Mundy St. Clair, M.D. Medico-Chirurgical College of Philadelphia, 1906; a member of the resident staff of Blockley Hospital, Philadelphia; for two years assistant physician in the Central Indiana Hospital for Insane, Indianapolis; died in Blockley Hospital, May 12, from meningitis, aged 27.

Lindsay Johnson, M.D. University of Louisville, 1874; Hospital College of Medicine, Louisville, 1877; a member of the Medical Association of Georgia; for several years professor of anatomy in the Hospital College of Medicine; died at his home in Cartersville, Ga., May 11, aged 58.

Ezra J. Ayers, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1871; of California, Mich.; for more than 40 years a practitioner of California township, Kent county, Mich.; was injured in a runaway accident near his home, May 12, and died early next morning, aged 70.

Robert B. Wilson, M.D. Syracuse University, 1894; for 40 years a practitioner of Tower City, Pa., and publisher of the *Echo*; chief burgess and member of the school board of Tower City; died at the home of his son in Ardmore, May 8, from cerebral hemorrhage, aged 80.

Samuel Beach Jones, M.D. College of Physicians and Surgeons, New York City, 1872; a member of the Medical Society of the State of New York and the New York Academy of Medicine; died at his home in New York City, May 13, aged 67.

Landon C. Johnson, M.D. Ensworth Medical College, St. Joseph, Mo., 1893; formerly assistant health officer of St. Joseph, and superintendent of the Enworth Hospital; died at his home in Joplin, May 2, from cancer of the stomach, aged 43.

Isaiah B. Seagley, M.D. College of Physicians and Surgeons, Chicago, 1896; a member of the American Medical Association; formerly of Scotland, S. D.; died suddenly at his home in Presho, S. D., May 7, from angina pectoris, aged 47.

Charles Ward Thorpe, M.D. Gross Medical College, Denver, 1903; acting assistant surgeon in the U. S. Army with Philippine service; formerly of Denver; died at his old home in Nicholasville, Mich., April 16, aged 39.

Lucius S. Campbell, M.D. American Health College, Cincinnati, 1882; for many years a practitioner of Marshfield, Mo.; died at the home of his son in Springfield, Mo., April 11, from senile debility, aged 83.

Thomas Green Duncan, M.D. University of Louisville, 1868; Bellevue Hospital Medical College, 1870; a Confederate veteran; died at his home in Victoria, Texas, May 13, from cancer of the liver, aged 69.

James Thomas Polson (license, Mo., 1883); a member of the American Medical Association; for 44 years a practitioner of Laclede, Mo.; died at his home, April 13, from carcinoma of the thyroid gland, aged 71.

William D. Scott, M.D. Rush Medical College, 1866; a member of the Michigan State Medical Society and a veteran of the Civil War; died at his home in Ithaca, May 9, from cancer of the throat, aged 68.

Benjamin F. Budworth, M.D. University of Minnesota, Minneapolis, 1902; of Shelly, Minn.; died in the Northwestern Hospital, Minneapolis, May 9, from pneumonia, following pulmonary abscess, aged 41.

John Eliot Blaine, M.D. Bellevue Medical College, 1872; in charge of an institution for the cure of alcoholism and the drug habit in St. Louis; died in the institution, May 11, from angina pectoris, aged 59.

Isaac Carey, M.D. Botanico-Medical College, Cincinnati; for more than sixty years a practitioner of Grant county, Ind.; died at the home of his son in Marion, Aug. 2, 1909, from senile debility, aged 96.

William Clark Snyder, M.D. New York Homeopathic Medical College, New York City, 1906; of Utica, N. Y.; died at the home of his father in Binghamton, N. Y., April 30, from tuberculosis, aged 28.

Martin Cagle, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1894; of Adairsville, Ga.; was crushed between a grain platform and a moving boxcar at Atlanta, May 6, and instantly killed.

Russell B. Moore, M.D. Kansas City (Mo.) Hospital College of Medicine, 1885; for 51 years a practitioner of Auburn, Ga.; died at his home in that city, March 18, from intestinal obstruction, aged 76.

William P. LaFollette, M.D. University of Louisville, 1880; formerly of New Salisbury, Ind.; died at his home in Mott, Harrison county, Ind., recently, from pulmonary tuberculosis, aged 58.

Jenkins DeVaney Pope, M.D. St. Louis Medical College, 1851; formerly a member of the Arkansas Medical Society; died at the home of his son in Monticello, May 1, from senile debility, aged 85.

Thomas Hall McCorkle, M.D. Medical College of Ohio, Cincinnati, 1879; of Terre Haute, Ind.; died in St. Anthony's Hospital, Terre Haute, March 29, from nephritis, aged 64.

Robert L. Duncanson, M.D. Ensworth Medical College, St. Joseph, Mo., 1892; of Ionia, Kan.; died at the home of his daughter in that city, April 25, 1909, from tuberculosis.

Patrick H. Perkins, M.D. McDowell Medical College, St. Louis, 1855; for 45 years a practitioner of Linneus, Mo.; died at his home, April 14, from senile debility, aged 81.

Lewis A. Denton, M.D. Long Island College Hospital, Brooklyn, 1876; a member of the Buffalo Academy of Medicine; died at his home, May 8, from pneumonia, aged 60.

Hezekiah Doster, M.D. Bellevue Hospital Medical College, 1872; of Poneto, Ind.; died at the home of his daughter in that place, May 11, from paralysis, aged 67.

Edward Franklin Bittner, M.D. Eclectic Medical Institute, Cincinnati, 1899; died suddenly at his home in Somerset, Pa., April 29, from angina pectoris, aged 41.

Simon P. Putt, M.D. Starling Medical College, Columbus, Ohio, 1878; died at his home in Baltic, Ohio, May 1, from chronic interstitial nephritis, aged 56.

Robert Franklin Conkle, M.D. Western Reserve University, Cleveland, 1872; died at his home in Coraopolis, Pa., May 8, after a surgical operation, aged 61.

Hiram Lee Nease, M.D. Vanderbilt University, Nashville, 1898; died at his home in Shelbyville, Tenn., May 9, from cerebral hemorrhage, aged 43.

George W. Wilson, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1863; died at his home in Curtis, Neb., May 5, from senile debility, aged 75.

Irvin J. Bowen (examination, N. Y., 1874); a practitioner for 51 years; died at his home in Ashville, N. Y., May 12, from heart disease, aged 76.

Sandapher B. Spickard, M.D. Vanderbilt University, Nashville, 1882; died at his home in Jackson, Miss., May 7, from cerebral hemorrhage, aged 53.

Van Wagener, M.D. Medical College of Ohio, Cincinnati, 1876; died at his home in Bridgeport, Ohio, May 6, from cerebral hemorrhage, aged 56.

Philip Lloyd Pollock, M.D. Hahnemann Medical College, Philadelphia, 1901; of Fort Worth, Texas; died in a hospital in that city, May 1, aged 30.

Charles Treat Lyons, M.D. New York University, New York City, 1852; died at his home in Waverly, N. Y., May 9, from senile debility, aged 88.

Robert H. Harmon, M.D. Tulane University, New Orleans; a Confederate veteran; died at his home in Marion Station, Miss., April 30, aged 66.

Horace B. Duncan, M.D. University of Louisville, 1876; of Williamsburg, Ky.; died in the University Hospital, Louisville, May 2, aged 72.

Joseph Brackbill, M.D. University of Pennsylvania, Philadelphia, 1869; died at his home in Reading, May 6, from heart disease, aged 65.

Delma C. Campbell (license, Miss., 1901); formerly of Hesterville, Miss.; died recently in Chihuahua, Mexico, from tuberculosis, aged 34.

Walter C. Jackson, M.D. Tulane University, New Orleans, 1900; died at his home in New Orleans, May 11, from appendicitis, aged 30.

Buchanan Ramer, M.D. Indiana Eclectic Medical College, 1890; died at his home in Surprise, Ind., May 8, from nephritis, aged 53.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ST. LOUIS, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fifth Annual Meeting, held at Washington, D. C., May 3-5, 1910

The President, Dr. Henry Hun, of Albany, in the Chair

Officers Elected

The following officers were elected: President, Dr. F. Forchheimer, Cincinnati; vice-president, Dr. J. George Adami, Montreal; secretary, Dr. George M. Kober, Washington (reelected); recorder, Dr. S. Solis Cohen, Philadelphia (reelected); treasurer, Dr. J. P. Crozer Griffith, Philadelphia (reelected); member of council, Dr. George Dock, New Orleans.

Etiology of Subacute Infective Endocarditis

Dr. E. Libman and Dr. H. L. Celler, New York: During the past eight years we have studied 43 cases of subacute infective endocarditis, in 36 of which blood cultures were made during life. The cases varied in duration from four months to a year and a half, and in nearly all the onset was insidious. Fever occurred in all. Other frequent symptoms were sweats, malaise and gastric or intestinal disturbances. There were progressive weakness and emaciation, and the spleen was nearly always enlarged and palpable. There were pains in the joints, bones and muscles. Painful erythematous cutaneous nodules appeared to be pathognomonic. No patient recovered. Except for one case of infection by the influenza bacillus, there have been found in the blood of these cases two types of organisms, the one resembling the other quite closely. These organisms resemble the pneumococcus in certain respects, but most of them more closely resemble the streptococcus. These organisms, when found in the blood, seem to be diagnostic of the disease.

DISCUSSION

Dr. Francis P. Kinnicutt, New York: As I understand Dr. Libman, the prognosis in these cases depends largely on the results of the blood culture. If this disease can be proved to be infectious and due to the organism he describes, the prognosis must be extremely unfavorable. If we can determine the prognosis by means of blood cultures, that should be a useful means at our disposal.

Dr. James B. Herrick, Chicago: I would like to ask Dr. Libman in what proportion of cases was there a history of valvular lesions preceding the chronic endocarditis? Also, what relation does the organism he described bear to the so-called organism of rheumatism?

Dr. Frank Billings, Chicago: My experience with cases of chronic infective endocarditis agrees with that of Dr. Libman in regard to the clinical course of the disease and the fatality of it. Last year we reported 15 cases of this type, and since that time we have had 10 or more. One finds the disease more prevalent than is commonly supposed. The disease may be mistaken for malaria, subacute rheumatism, typhoid or tuberculosis. I do not think one can make a diagnosis of the condition by taking blood cultures. One may say that he has a case of chronic infective endocarditis to deal with, but one must remember that some of the very important diagnostic symptoms are absent at the beginning of the disease. The blood cultures will certainly help us in determining the various forms of endocarditis.

Dr. E. C. Rosenow, Chicago: I am sure we are dealing with the same disease, although in our studies to differentiate the organisms we differ slightly in the smaller details. During the first year of this work I thought I was dealing with the *Streptococcus pyogenes*. Further studies, however, during the last two years have convinced me that I was dealing, not with the streptococcus, but really with a modified pneumococcus.

Dr. F. Forchheimer, Cincinnati: It seems to me the most important outcome of this discussion is the fact that one observer here has isolated a pathogenic organism and another observer has verified his findings in a disease which we have been taught to believe was due to a number of different organisms. If this is correct, then we have made an enormous step forward in the recognition of this disease. I have seen a large number of cases which clinically would be considered under the head of this form of endocarditis. I have had a number of cultures made, and I have found a large number of organisms. Some of my patients have recovered. Evidently we are dealing with a different form of endocarditis.

Dr. Libman: One should expect a fatal termination in every case in which he finds this organism in the blood. In all the cases that I have had the disease has been superimposed on previous cardiac disease. As to the relationship of the organism to the so-called organism causing rheumatism, I cannot answer, as no bacteria have been found in the blood in the latter condition. As to the question of other means of diagnosis, we have made studies of the blood microscopically with the hope of finding certain cocci, but we have been unsuccessful. When these organisms were not found in cultures, they were not found otherwise.

The Commoner Types of Functional Cardiac Murmurs

Dr. William S. Thayer, Baltimore: During the past seven years I have been especially interested in studying cardiac murmurs in individuals who appeared to be perfectly normal. A cardiac murmur is but one and sometimes an unimportant one of the links in the chain of evidence leading to the recognition of disease of the heart. Certain cardiac murmurs are present normally in a large proportion of healthy young people. The common forms of these murmurs are: (a) The basic systolic murmur, heard best in the third left interspace, and often all over the area in the recumbent posture. This murmur disappears in the erect posture or full respiration. (b) The systolic murmur, sometimes limited to the apex, sometimes heard all over the cardiac area in the recumbent posture, disappearing in the erect posture. (c) The cardiac respiratory inspiratory murmurs. The commoner functional murmurs, those heard in healthy individuals, should be carefully distinguished from those other murmurs which may arise at various orifices, without actual valvular disease, but, nevertheless, as a result of pathologic changes in the heart muscle or in the blood. The anemic murmurs, systolic and diastolic, depend on the weakness of the heart muscle. A familiarity with the cardiac murmurs common in the normal individual is at least as important as an acquaintance with those murmurs which are associated with cardiac disease.

Epidemiology of Poliomyelitis

Dr. Joseph Collins, New York, read a paper which will appear in The Journal.

Pathology of Poliomyelitis

Dr. B. Sachs, New York: The examination of pathologic specimens from cases of acute poliomyelitis bears out the toxic character of the disease process. It is vascular in origin, not confined solely to the area of the anterior spinal artery, as was once believed, but involves the central gray matter and almost the entire cross-section of the cord; at times it involves the lower portions of the brain axis. The disease expends its force chiefly on the ganglion cells of the anterior horns, so that there is still much justification for retaining the old name, poliomyelitis anterior.

DISCUSSION

Dr. M. H. Richardson, Boston: The State Board of Health of Massachusetts began an investigation of this disease three years ago. In 1907 there were 235 cases; in 1908, 185; in 1909 the cases numbered nearly 1,000. That is not essentially a city disease, but rather a rural or suburban disease. Any community which has a severe epidemic one year does not necessarily have a severe one the next. The seasonal incidence of this disease is interesting. In this climate the disease occurs between the months of May and November; in the southern hemisphere it prevails from March to May. In writing to the medical officers in the southern cities and in Cuba a curious fact came out, namely, that the disease in Cuba also had a seasonal incidence from May to October. This shows that temperature alone cannot account for the incidence. We wrote to several institutions in the state in which children are kept, and another curious fact came out, namely, that among 3,600 children in these institutions in the state only one case was found in a child under fifteen years of age. This is interesting in proving that children living in these institutions and protected from those who have the disease do not get it.

A circular letter was sent to physicians in the state recommending that the cases be quarantined and that hexamethylenamin be administered. In every case that came to autopsy in Massachusetts there seemed to be a definite relation between the fatal cases and an enlarged thymus gland. I should like to ask if that is a common experience with others here who have studied the disease.

Dr. B. Sachs: In performing autopsies on these cases other organs besides the thymus gland will yield evidence of a general infection. In the lungs frequently will be found a bronchopneumonia. The liver and the spleen will show distinct evidences of a general infection. In one case I saw every gland in the body was found to be enlarged.

Congenital Syphilis of the Heart

Dr. A. S. Warthin, Ann Arbor: I wish to call attention to the diffuse fibrosis of the myocardium due to congenital syphilis and the relation of the congenital fibrosis of the heart to cardiac insufficiency in young and early life. Cardiac changes occur in all cases of congenital syphilis in which the liver shows the changes characteristic of congenital syphilis. Infantilism and delayed puberty are associated with this form of heart lesion.

(To be continued)

ILLINOIS STATE MEDICAL SOCIETY

Sixtieth Annual Meeting, held at Danville, May 17-19, 1910

The President, Dr. J. L. Wiggins, East St. Louis, in the Chair

Addresses of welcome were delivered by Hon. Louis Platt, mayor of Danville, and by Dr. Benjamin Gleeson, president of the Vermillion County Medical Society. President Wiggins responded to these addresses.

The New Officers

The following officers were elected for the ensuing year: President, Dr. Alfred C. Cotton, Chicago; president-elect, Dr. W. K. Newcomb, Champaign; vice-presidents, Drs. J. W. Hamilton, Mount Vernon, and J. E. Stubbs, Chicago; treasurer, Dr. E. J. Brown, Decatur, reelected; secretary, Dr. E. W. Weis, Ottawa, reelected; delegates to the American Medical Association, Drs. W. F. Grinstead, Cairo; E. W. Weis, Ottawa; S. C. Glidden, Danville; J. E. Allaben, Rockford; J. L. Wiggins, East St. Louis; Albert L. Brittin, Athens; alternates, Drs. G. W. Green, Chicago; George F. Allen, Aurora; W. E. Shallenberger, Canton; George F. Butler, Chicago; Frederick A. Tice, Chicago, and M. S. Marcy, Peoria.

Aurora was selected as the place for holding the next annual meeting.

Medical Treatment of Pelvic Diseases of Women from the Standpoint of the Surgeon

Dr. J. F. Percy, Galesburg: My conception of a medical pelvic case is one in which there is infection, misplacement and distress without fixation. Fixation is Nature's slow way of improving local conditions in the pelvis until either the menopause or surgery removes the conditions which make the fixation necessary. Surgery has won some of its greatest triumphs in the cases where inflammatory fixation was substituted for surgical fixation. Surgery has done some of its worst work or gotten almost negative results in cases of infection. On the other hand, the medical practitioner, in attempting to treat cases, has converted many of them into major surgical cases. The average pelvic case complains more of backache than of any other symptom. There are other adjuncts to the successful treatment of this class of patients than mechanical or medical procedure. The two most important are physical and sexual rest, and second, freedom from worry.

DISCUSSION

Dr. Clifford U. Collins, Peoria: I have very little faith in the local treatment of pelvic diseases. I have held to the views advanced by Dr. T. J. Watkins, who, in 1905, called attention to the inefficacy of vaginal douches and iodin applied to the vaginal vault and tampons put in the vagina for the treatment of inflammation of organs high up in the pelvis, and which have an entirely different blood supply. Such treatments may do good for a time, but the relief is not permanent. I find it advantageous in these cases to call to my aid the internist either before or after operation.

Dr. S. C. Stremmel, Macomb: I want to emphasize rest in the pelvic infections of women. I know of no form of local treatment which does any good in the treatment of these pelvic infections in women. Rest is the best form of treatment for inflammation or infection anywhere, and where it can be possibly secured it may alone do the work.

Dr. Edward Bowe, Jacksonville: In the majority of women who have become neurasthenic from injuries in labor, or in whom a pathologic condition has existed for some time, the neurasthenia has become fixed, and local treatments will only exaggerate the condition and create a degree of introspection bordering on psychasthenia. The best treatment is rest.

Dr. W. F. Grinstead, Cairo: Both the physician and the surgeon are apt to go to extremes and see everything from their particular standpoint. The physician gets in his good work in these cases in the acute stage. He tries to effect a cure before the condition becomes surgical, because in the beginning most of these conditions are medical. When we have an infection that has gone on to the chronic stage, which involves the cervix, or has extended into the corpus or into the tubes, the physician is wasting his time as well as the means of the patient in attempting to restore that patient to health by the usual medical means. We have then a condition which must be relieved surgically.

Dr. Channing W. Barrett, Chicago: The question is one of close study of the pathology of pelvic disease. A patient with pelvic disease is not going to be cured purely by rest, because there are a number of conditions which will not be affected by the rest treatment. The rest treatment is an aid. Pelvic disease is not going to be cured altogether by operative measures because there are a lot of conditions which surgery would not help but injure.

Dr. M. S. Marcy, Peoria: Dr. Percy in his paper made the statement that the physician who treats these patients by local means is imposing on them. I would like to ask him if the physician imposes on a patient when he can by local treatment relieve a backache, a severe pain on the top of the head, etc.

Dr. J. F. Percy: In reply to the remarks of Dr. Marcy, the point I tried to make was with reference to the value of fixation. We should simply follow Nature's methods. Nature fixes these structures for two purposes; first, to get a chance at the infection, and second, to hold the parts as nearly in the anatomic positions as they were when the infection began.

Two Thousand Blood Examinations for Hemameba of Malaria

Dr. T. M. Aderhold, Zeigler: To avoid errors, accept nothing but the microscopic diagnosis. Anything which lowers the vitality of the individual, whether fatigue, heat, cold, or other disease, predisposes him to malarial infection, or to a relax if he already harbors the parasite. In the locality where these observations took place malaria was not as prevalent either as a primary disease or complicating other diseases, as it was thought to be by the profession of the locality. If a person has more than one attack of malaria within a year, the attacks after the first one are more liable to the relapses than reinfections. *All malarial patients should be advised to take three months' treatment. Malaria complicating other diseases should be treated as though no other disease were present until the acute symptoms subside, and then the treatment should be modified. A promise of cure in malaria should not be given until the patient has been more than one year without symptoms.*

Some Diabetic Obiter Dicta

Dr. S. T. Robinson, Edwardsville: We should bear these diabetic facts in mind: While at the beginning of treatment there is intolerance of carbohydrate, so an abrupt and radical reversal of diet may produce intolerance also of proteid. Thus there will be a double intolerance and the trouble deepens. But it is wholly on the establishment of a tolerance of proteid that success depends; *for it is only after a more or less severe proteid diet that tolerance of carbohydrate will be regained. Once this has been accomplished, the urine may begin to run* sugar-free. If now, with tolerance of such a diet fully established, some weight is gained, he has made a distinct stride forward. Even more notable, if with the same diet, and a urine continuously sugar-free, there is secondarily some loss of flesh, he has made much greater progress, for it will be found that he can again assimilate an appreciable quantity of carbohydrate. Such results are, however, seldom obtained by simply directing the patient to avoid sugar and starch, and to live mostly on meat, or by handing him a printed diet list. To-day a technic in this matter has developed that calls for much special training. The surgeon exacts a well-appointed hospital for his operations, so the physician, who must guide and educate the diabetic through a maze of chemical, physiological and dietetic technic, will demand and receive the same helps.

The Technic and Value of the Wassermann Test in the Diagnosis and Treatment of Syphilis

Dr. W. T. Mefford, Chicago: The technic is so simplified that all physicians can mix the materials and define the results. By the test one is enabled to diagnose active syphilis in all stages, to know whether treatment is being carried on successfully, and how long it should be continued, or when to begin treatment in late syphilis. Its greatest value is to the internist, enabling him to differentiate many conditions presenting complicated clinical symptoms. *Active syphilis is often present with many chronic or long drawn-out diseases, as tuberculosis, diseases of the liver, typhoid fever and artery diseases, etc.*

DISCUSSION

Dr. F. G. Harris, Chicago: The technic of this reaction is difficult and all the attempts made to modify it with a view to simplifying it have simply created confusion and have brought the Wassermann test in this country into more or less disrepute. *The technic of mixing solutions and determining whether one hemolyses or one does not is simple. When we get a tube that hemolyses it may show negative, while if we let another man make the test it may show positive. I am opposed to the drop method of doing a Wassermann. We know that this is a quantitative reaction, and where we are working in drops we are working with unknown quantities.*

Dr. Robert H. Babcock, Chicago: The value and necessity of the Wassermann test in ordinary clinical practice have been borne out by my experience this winter. Of a number of cases thus tested, one was a combined pulmonary tuberculosis with aortic insufficiency, the man having attacks of hemoptysis. Suspecting there might be a syphilitic basis, I had the test made, and the reaction was positive. He was put on mercury and his physician reported within three weeks marked improvement, with cessation of the hemoptysis.

Bacteriology and Pathology of Joint Infections

Dr. E. E. Irons, Chicago: In addition to infections of the joints resulting from trauma or direct extension from an adjacent focus of suppuration, or associated with certain specific diseases, such as syphilis and tuberculosis, lesions of the joints, periosteum and tendon sheaths may occur in practically all the acute infectious diseases, either as an incident in the course of the disease, or as a more or less remote sequel. The pathologic changes in the joint depend on the extent of involvement of the articular and periarticular tissues, the duration of the active stage of the infection, and the relative virulence of the infecting agent.

(To be continued)

OHIO STATE MEDICAL ASSOCIATION

Sixty-fifth Annual Meeting, held at Toledo, May 11-13, 1910

The President, Dr. W. H. Snyder, Toledo, in the Chair

The officers elected were named in The Journal, May 21, page 1700.

Causes and Operative Treatment of Sterility in the Male

Dr. Francis R. Hagner, Washington, D. C.: Sterility in the male is due, first to aspermia; second, to azoospermia; third, to oligospermia; fourth, to anatomic abnormalities which prevent the passage of semen through the urethra; fifth, to stricture of the urethra. Men with double undescended testicles are almost invariably sterile; and also those whose testicles have received serious injury, causing destruction of the secreting structures or occlusion of the efferent ducts. This later is a condition which obtains in epididymitis, the inflammatory exudate and presence of abscesses in the epididymis, with the consequent formation of scar tissue cause an occlusion of the efferent ducts of the epididymis. Abscess formation in acute gonorrheal epididymitis is much more common than is generally supposed, as in 48 cases that I have operated, abscesses were demonstrated in 80 per cent. Frequent masturbation and sexual excesses, syphilis and tuberculosis, are frequent causes of sterility. Another cause is the *x*-ray. The principal cause of sterility in the male, however, is bilateral gonorrheal epididymitis. In this disease the globus minor is the portion of the epididymis most involved, and it is in this portion that occlusion has the most dangerous results, as there is but one efferent duct, while in the globus major the efferent ducts are numerous, and the obstruction of one or two would still leave other channels. Dr. Quinby of Boston has tied off the vas deferens in guinea-pigs at its exit from the globus minor, and then made an anastomosis between the globus major and the vas above the ligation, in the method recommended by Martin of Philadelphia. In from 10 to 27 days, 3 out of 4 pigs thus operated on showed spermatozoa in the fluid ejaculated by means of electric stimulation. In dogs spermatozoa reappear in from 6 to 8 days.

Anastomosis of the vas deferens is performed by making an incision through the skin and coverings of the epididymis, which is approached from the outer side so as not to wound the spermatic artery. The artery of the vas is pushed aside and a one-half inch incision is made in the vas deferens on a level with the globus major, along its axis, care being taken to get into the lumen of the tube. A portion of the globus major is picked up between two fine forceps and an elliptical piece removed to correspond with the incision in the vas deferens. Four sutures are inserted by curved intestinal needles, one at the upper angle of the wound joining the vas and the cut surface of the epididymis, one at the lower angle, one at the outer and one at the inner side. When these are approximated, a perfect little pocket is formed by the spreading out of the cut vas deferens and the elliptically cut globus major. The wound is then closed and dressed.

Features in the Surgical Treatment of Gastric Ulcer

Dr. M. D. Haines, Cincinnati: The stomach, duodenum, pancreas and liver are intimately related embryologically, anatomically and physiologically, and it may be concluded, therefore, that they are intimately associated pathologically, and that a serious lesion, such as chronic gastric ulcer, will necessarily influence in a greater or lesser degree the functions of the pancreas and liver. Kaufman showed that chronic cholecystitis with acute exacerbations always has a direct influence on ulcer; conversely, alterations in stomach secretions cause acute exacerbation in cases of chronic cholecystitis. It is a well-known fact that mental conditions influence the bodily secretions in general, examples being the influence of the pregnant uterus on the stomach, and Opie's well-known explanation of pancreatitis. It may be concluded, therefore, that the stomach in its secretory functions is no exception to the general physiologic laws, regulating the secretion of organs in general. In view of these facts, in a number of instances I have drained the gall-bladder in conjunction with operative procedures instituted for the relief of chronic ulcer of the stomach. My patients have done better after operation than when a mere gastrojejunostomy or other operative procedure had been done on the stomach for the relief of ulcer.

DISCUSSION

Dr. R. B. Hall, Cincinnati: I have some knowledge of Dr. Haines' work in adopting this method of treatment, and his patients recovered better than when drainage was not used. I have drained the gall-bladder in a few instances, and the patient makes an easier and smoother convalescence.

Dr. Means, Columbus: I can recall some cases in which there might have been some relief to my patient had I drained the gall-bladder. For instance, in the last six months I did a gastrojejunostomy, and the patient within 24 hours from the operation began retching and vomiting bilious matter, and eventually died. It is barely possible that had drainage of the gall-bladder accompanied the operation, the patient might have been relieved, and yet I am not clear as to the theory.

(To be continued)

AMERICAN THERAPEUTIC SOCIETY

Eleventh Annual Meeting, held at Washington, D. C., May 5-7, 1910

Election of Officers

Dr. Harvey W. Wiley, Washington, D. C., was elected president. The following were reelected: Drs. A. D. Blackader, Montreal, Howard van Rensslaer, Albany, N. Y., and Robert T. Morris, New York, vice-presidents; Dr. Noble P. Barnes, Washington, D. C., secretary; Dr. A. Ernest Gallant, New York, treasurer, and Dr. P. B. Porter, New York, editor of the transactions. The next place of meeting is to be Boston, in May, 1911.

President's Address: The Progress of Therapeutics

Dr. James C. Wilson, Philadelphia: At the beginning of the last third of the nineteenth century the study of causes formed a sure foundation in the facts of science, and empiricism in therapeutics gave way to rationalism. Half a century has not yet elapsed, and the art of healing shows signs of being revolutionized. The modern theories of infection and immunity are established on unassailable facts. The history of the advance of medicine would be but a series of disconnected episodes were it not that it teaches us that here, as in other fields of human endeavor, knowledge ripens slowly, and that failures are the stepping-stones to success. It teaches us another lesson worth the knowing, namely, that the control of efforts can be compassed only through a knowledge of their causes. More than two thousand years of empiricism before reason came to her own in medicine! There were charms and incantations and pilgrimages and votive offerings, but no calamity of plague or pestilence was averted, and no man who was really sick was made well. Drugs there were of all kinds, and many of them potent, but "Not poppies nor mandragora; nor all the drowsy syrups of the East" could touch the ills of mankind at their source. Jenner alone in all time before the era of bacteriology—our era—applied the knowledge of causes to preventive medicine and wrought the wonder of a rescued world. To-day we watch the effects of the antitoxin made possible by the work of Klebs and Loeffler, or those which follow the administration of Flexner's serum, and experience the sensation of having witnessed a miracle. In later times there has been less and less of indirection and a progressively increasing tendency toward practical results. Specialism and organization are complemental. Without the one the other cannot exist, and the new medicine is the product of this union. A comprehensive survey of the work done by the members of this society individually and collectively discovers here also a well-defined tendency to specialism. Three main therapeutic trends have been differentiated: First, the Hippocratic medicine, in which the forces of Nature other than drugs play the most important rôle; second, the subject of psychotherapy and re-education in the management of some of the functional neuroses; third, the general study of therapeutics as comprising the empiric use of drugs, on the one hand, and the rational employment of causal remedies on the other. Our work consists in the application of the means to the end, and the time is now at hand for us to enter on the latest phase of applied therapeutics from this point of view, namely, rational therapeutics based on the latest results of the scientific study of the causes of disease, serum therapy, opotherapy, and the use of bacterin.

The Treatment of Pneumonia

Dr. Alexander McPhedran, Toronto: It is incorrect to call pneumonia a fever, as is now often done. The disease is only one phase of pneumococcic infection, and in it there is a local, as well as a general infection. Death almost always occurs through the vascular system, the vessels, as well as the heart, being affected; and is due to the depression of the circulatory center in the medulla caused by the toxic albuminoid of the pneumococcus of cardiac failure. There are two groups of cases, the asphyxial and the syncopal. In the first, which is much the more common form, the venous system is surcharged with blood and the arterial undercharged. In the second, all the organs, including the heart, are anemic. In these cases, too, the right ventricle may be found distended, but this probably occurs only in the throes of death. In both classes of cases the aim of treatment is to raise the blood-pressure. There is no specific for pneumonia, and our ability to treat it has not kept pace with our knowledge of the features of the disease. The mortality is extremely high among urban populations, and I have observed that this is especially the case in two cities, Chicago and New York. The two most important causes of this appear to be the excessive heat in the houses and the lack of proper clothing for protecting the body. As regards the matter of prophylaxis, two diseases are particularly productive of pneumonia, measles and influenza, and very careful after-treatment in these would seem to have considerable effect in warding it off. The so-called curative treatment by means of a vaccine or serum has not as yet proved very satisfactory. If a cure is to be effected the agent of this character employed must be a bacterin rather than an antitoxin. A most serious difficulty in this kind of treatment is that there are various strains of pneumococci, and to have it efficient we should know the particular strain that is present in any given case, and then have a bacterin especially adapted for that form. At present, therefore, we have to rely on symptomatic treatment, or, as we had better call it, treatment of the patient. The usual essentials are complete rest, good nourishment, and plenty of fresh, cold air. On the whole, the latter is better than anything else as an element of success. In my experience the results are better in hospital than in private practice, because in hospitals the patient is under the constant supervision of a trained physician. I think too little opium is given in this disease. There is no cardiac tonic equal to opium and its derivatives, and in some cases no remedy but this will produce the desired effect. The cases in which opium is dangerous are not those of pure pneumonia, but rather bronchopneumonia. In the cases in which venesection is indicated this must be early and free in order to be effective.

Malarial Infections in the Canal Zone

Dr. F. N. Shook, U. S. N.: In this region the most important malarial infection, from the standpoint of diagnosis and prognosis, is the estivo-autumnal. Single tertian and double tertian infections are common, but quartan very rare. The principal types of estivoautumnal infections may be classified as (1) mild; (2) severe; (3) mixed; (4) pernicious, including the hyperpyretic type. The experience of physicians on the Isthmus emphasizes the following points: (1) In tropical malaria quinin should be given either in solution or capsules, as tablets may not be absorbed; (2) if properly administered, hypodermics of quinin rarely cause abscess; (3) in cases of malarial fever in adults in the tropics which do not show pernicious symptoms the treatment with an initial dose of twenty grains of quinin, preferably in solution, followed by ten grains three times a day, is almost uniformly successful; (4) in the treatment of malarial fever in pregnant women in the tropics the safest rule is to disregard the pregnancy and treat the malaria in the usual manner; (5) after surgical operations in malarial districts in the tropics pernicious malarial fever may develop unless a prophylactic course of quinin is first given.

Important Therapeutic Indications in the Treatment of Typhoid Fever

Dr. J. Blake White, New York: To the extent that we succeed in modifying the intestinal morbific process will we not only lessen the thermic changes attending the disease, but also prevent the various complications formerly so often encountered. As the fever apparently has its origin in the intestinal inflammation, and the absorption of specific toxins, the first therapeutic indication is in the direction of the use of remedies which have the essential quality of modifying this condition. No disease, in my opinion, is more manageable than typhoid fever, and I have yet to note as prompt or more constant effects from any kind of treatment in any other affection than those resulting from intestinal antiseptics in typhoid. As soon as the diagnosis is made, or earlier if there is any doubt about the matter, the combination used by Woodbridge should be given, though in somewhat larger doses than he recommended. The best manner of administering the remedies is in tablet triturates, each tablet to be followed by two or three swallows of some pure spring water, not aerated. After some modification of the fever is observed larger doses of the antiseptic may be given in capsules. Should the case not be seen until the patient has become delirious and internal medication is impracticable, I give sodium sulphoborate hypodermatically, and subsequently begin the internal antiseptic treatment as soon as the patient's condition permits. At an early stage, about the end of the second week, when, with rare exceptions, the temperature declines under the antiseptic treatment to normal, I usually give some alcoholic stimulant, as well as strychnin, in order to anticipate the debility likely to ensue after such fall. The practice of cold tubbing cannot be too strongly condemned, as it is too exhausting to the patient, and is also irrational, since this method of reducing the temperature is not intended to have, and never can have, any effect on the pathological causes of the hyperpyrexia. The simple temporary reduction of temperature has little advantage, and for the toxemia from local lesions and the general blood dyscrasia we have no better resource than antiseptic medication, the result of which is a permanent reduction of the fever. I am willing to admit, however, that ablutions have some useful application in strengthening the vital powers, and therefore approve of and practice regular lavations with sterile water and alcohol, the water being tempered to the enduring capacity of the patient. It is of vital importance that regular function of the bowels should be kept up throughout the illness and convalescence, and under the antiseptic method laxatives or rectal irrigation are not infrequently called for. The maintenance of the nutrition is, of course, of the utmost importance, and as to the dietary, eggs, milk and light meat broths may be given. I permit cereals, well boiled, at any time, and the resort to solid food just as soon as the patient's condition warrants it; generally at the end of the second week. In the management of typhoid much depends naturally on the ability, vigilance and devotion of the nurse.

The Treatment of Leukemia by the Roentgen Ray

Dr. Reynold Webb Wilcox, New York: The case here reported had apparently lasted about ten years when first observed on Sept. 4, 1909. The patient was a male, 29 years old. The pallor of the skin and mucous membranes were profound, and the spleen, which was hard, occupied the whole of the left abdominal cavity, extending two fingers' breadth to the right of the umbilicus. There was no tenderness over the flat bones, and no enlarged glands were felt. In the use of the *x*-ray, under the direction of Dr. Carl Beck, a hard tube was employed, with fifteen minutes' exposure over the spleen, two or three times a week. Iron and arsenic were also given.

Blood counts made from time to time showed, for the most part, a progressive improvement in the condition of the blood, and on April 28, 1910, the lower border of the spleen was but two finger breadths' below the free border of the ribs. The pallor had largely disappeared, and for the preceding two weeks the patient had engaged in active employment. In this instance the massive enlargement of the spleen, taken in connection with the absence of tenderness over any of the bones, and of any enlargement of the lymphatic glands, would indicate that this particular leukemia was of the splenic type, or possibly of the splenomedullary form sometimes called myelogenous. In this variety the Roentgen ray appears to be more successful than any other mode of treatment, though iron and arsenic are still believed to be of some service.

High Frequency Currents in the Treatment of Arteriosclerosis

DR. THOMAS E. SATTERTHWAITE, New York: Unless one has a static machine, a high frequency coil is best adapted for this kind of treatment. The powerful waves of the static form of electricity cause short waves of vibration in the capillaries, promote metabolism in an extraordinary way, and do no harm. In my experience, a diminution in the arterial pressure is the regular sequel to the use of the high frequency current, but the seances should not be prolonged beyond the time at which the pressure falls to normal. I have found that while the pressure may not always be reduced at each sitting, there was in all instances a progressive decline under the treatment. This should be given two or three times a week, or until the blood-pressure has fallen to the normal or nearly to it. It has sometimes been advised to use the faradic current as an adjuvant. Intestinal atony is often a complication of arteriosclerosis, and this current, applied over the abdominal walls, may be very helpful in relieving the constipation. In addition, mercurials, iodids, iron and arsenic should be employed according to the indications which may be present in any given case.

The Further Study of Diabetes as an Infectious Disease

DR. ALFRED KING, Portland, Me.: At the last meeting of this society I expressed the opinion that diabetes mellitus is an infectious disease, due to the presence of the yeast fungus, *Saccharomyces cerevisiæ*, and though, during the year that has since elapsed I have not had the opportunity to experiment on animals or complete my investigations, yet, with considerable additional experience, I have found nothing to disturb my confidence in the theory or my faith that it will be established. I have now examined forty patients and have obtained a pure fungus from the blood of all but one of these.

The Range of Activity and the Untoward Effects of Certain Spinal Analgesics, Based on Two Thousand Administrations

DR. W. B. BABCOCK, Philadelphia: The two thousand cases included all kinds of operations in all parts of the body. The safety of spinal, or, more properly speaking, nerve-root, anesthesia depends largely on the height in the spine of the nerve-roots which it is necessary to narcotize for any given operation. The higher up they are, the greater the danger. The delicate thing is to have the solution sufficiently light to affect the sensory nerves without involving the motor nerves. It can be made lighter by the addition of 10 per cent. alcohol to 4 per cent. of solution. By regulating the position of the patient's body it is possible to arrest the anesthetic at any point of the spine desired. In all operations in the upper part of the body it is essential to be prepared to perform artificial respiration at any moment. In the cases embraced in this report various anesthetic agents were employed.

Senile Epilepsy

DR. EDWARD D. FISHER, New York: Under this head I include only those cases occurring in adults (who are neither alcoholics nor syphilitics), especially those in the period of life when physical decline has already *begun to manifest* itself. The underlying etiological factor is arteriosclerosis, distinguishing it absolutely from essential epilepsy. There may have been few, if any, preliminary symptoms, beyond some fatigue formerly unusual, or a slight weakness of memory, until, as out of a clear sky, an epileptic attack takes place. The course of the disease varies somewhat with the course of life pursued after the first attack. The succeeding ones vary very much in frequency in different instances. After a seizure there may be a localized serous effusion, but this soon clears up, leaving no trace of paralysis or other impairment. There is probably a general sclerosis of the cerebral arteries, and the attacks are no doubt due to temporary occlusion of the vessels —possibly to venous stasis. The general tendency of the disease is towards dementia or premature senility, frequently accompanied by depression. The seizures may at times be very severe, and, in fact, may end in cerebral hemorrhage of the usual type.

The Routine Use of Autogenous Vaccines (Bacterins) in the German Hospital, Philadelphia

DR. J. C. DACOSTA, Philadelphia: Fifty cases are embraced in the report, of which 17 were classed as septicemia and 33 as local suppurative lesions. By them the following conclusions are suggested: 1. Autovaccines are of distinct service in the treatment of general septicemia, especially in postoperative cases in which surgical measures have been ineffectual. Vaccines are useless in combating a sepsis so intense as to stifle resistance, and in such instances the clinical severity of the infection, rather than the identity of the offending bacteria, is the criterion of prognosis. 2. From the laboratory viewpoint, the prognosis is better in toxemias than in proven bacteremias, and the outlook is hopeless when streptococci invade the circulating blood. 3. Autovaccines produce the best results in local infectious lesions. 4. In the class of infections under consideration autogenous emulsions should be used invariably rather than stock preparations, except in the presence of some acute emergency. 5. The opsonic index cannot be relied on as an indicator for inoculation and reinoculation, which should be governed by the general condition and local signs. 6. The best results follow a moderate initial dose of vaccine, with subsequent doses of greater potency and intervals of from three to seven days between the inoculations. 7. The larger one's experience with inoculation work, the more must one realize how imperfectly the true scope and limitations of vaccine therapy are understood.

The Delayed Menopause; its Dangers and Therapeutic Indications

DR. A. E. GALLANT, New York: In women with healthy reproductive organs the menopause should be established abruptly, at an age dependent on the age at which menstruation commenced; early, if begun late, and late if begun early. The menopause is "delayed" whenever menstruation is continued after the "approximate age" (using the approximately determined beginning of menstruation as a guide) and is associated with uterine flexion, version, fixation or neoplasm, or with tubal disease, syphilis, etc. In delayed menopause the greatest pathological danger lies in the presence or promotion of the growth of fibroid or malignant tumors. The contributory dangers are due to delay: 1. The patient fails to consult a physician, refuses examination, or refuses operation. 2. The physician delays examination, fails to diagnose the condition, or fails to recognize the importance of early operation. The danger signals are (1) atypical hemorrhage, (2) discharge, and (3) pain; signals which, if disregarded, will lead to disaster and death. At the "approximate age" the woman has reached the limit of fecundity; therefore the prophylactic removal of a useless and probably tumor-breeding organ is wholly justifiable, and the one sure method of putting an end to all the threatening dangers.

The Treatment of Parasyphilis in the Light of Recent Research; Paresis and Tabes Dorsalis

DR. T. A. WILLIAMS, Washington, D. C.: I believe leptomeningitis to be always present in these cases. In the treatment of syphilis the tendency at present is to rely almost exclusively on mercury. The iodids are considered of service only in dealing with gummata. I am of the opinion that many incipient cases of paresis and tabes may be cured by using mercurials to the utmost extent which the patient can tolerate. They should be employed by means of inunction or hypodermatic injection, as I have not found administration by the mouth efficient. The important thing is that these patients should be seen early by the neurologist.

SYMPOSIUM ON MATTERS PERTAINING TO THE REVISION OF THE PHARMACOPEIA

U. S. P. 1910; How May It Be Constructed?

Dr. O. T. Osborne, New Haven, Conn.: In opening this discussion it seems to me I can do no better than to elucidate some of my propositions already in print. As regards my recommendations that the new Pharmacopeia should contain such drugs only as are of positive therapeutic value, the decision as to what drugs are to be retained or deleted; and as to what new drugs are to be admitted, might well be left to a committee of five clinicians selected by the U. S. P. Revision Committee. As to the recommendation that it should give official approval to only the best of the official Galenic drugs, and of the salts of such mineral agents as iron and mercury, this also might be left to the judgment of a committee appointed by the revision committee, but one composed of five clinicians and five pharmacists. Every writer of a prescription, and most assuredly every teacher of materia medica, will approve of the proposition that the new Pharmacopeia should give the most simple titles to all new drugs, especially to the synthetic drugs. The heart-rending and brain-splitting attempt to prevent all possible advertisement of a proprietary drug has been followed by continuous damning all over the country, and has forced the ordering of the drug by its proprietary name, much to the profit of the drug promoter.

[Subsequently, the recommendations made by Dr. Osborne were, with some slight modifications, endorsed by the society and ordered to be transmitted to the new committee of revision.]

Revision of the United States Pharmacopeia

Prof. Joseph P. Remington, Ph.M., Philadelphia: The controversy which has been going on recently in the medical and pharmaceutical journals, and even in the public newspapers, concerning the scope of the new Pharmacopeia has developed two clearly marked views. On the one hand, there is a decided movement to curtail the list of articles to be admitted; but a powerful counter-movement has been set on foot to greatly enlarge the number of remedies. Both of these ideas will no doubt be ably championed in the coming convention, but it does not require a prophet's vision to foretell that neither extreme will ultimately prevail, and when both sides have been heard the next committee on revision will undoubtedly admit a selected number of the newest articles and will delete many of the older ones which, in the eyes of many members of the medical profession, have outlived their usefulness. The controversies which have for the most part been carried on in an admirable spirit, have been of great value in clearing the atmosphere, and both physicians and pharmacists will have a much clearer conception of the magnitude of the task before them, though they will have, to guide them, a vast amount of information gathered from all sources. While it will be difficult to always wisely make a proper selection, I have the faith to believe that out of the multitude of counsellors there will come wisdom, and that the ninth revision of the Pharmacopeia will prove to be the best that has been written.

Should the Pharmacopeia Contain Only Useful and Efficient Drugs?

Dr. N. S. Davis, Jr., Chicago: I believe that only useful and efficient drugs should be admitted, and am of the opinion that it would be quite possible for a group of physicians to determine satisfactorily what ones are really useful. Hitherto drugs have been judged by their use, not their utility. I would like also to see an epitome of the pharmacological action of the various drugs inserted in the Pharmacopeia, but suppose we can hardly go as far as that at present. For the good of the physician, as well as the patient, I believe that all compounds should be admitted.

Suggestions for the Pharmacopeia of 1910; a Brief Consideration of the Subject in Its Relation to the Federal Food and Drugs Act

Dr. F. P. Morgan, Washington, D. C.: The three years which have elapsed since this law went into force have offered an opportunity to test the efficiency of the Pharmacopeia as a legal standard, and, as might have been expected, instances have occurred in which the official standards have not proved altogether satisfactory. Among the changes which, in my opinion, would be desirable, are the following: that the proportion of foreign matter permissible in the crude vegetable drugs should be definitely fixed; that powdered vegetable drugs should be admitted; that with hyoscyamus, belladonna and stramonium the requirements as regards mydriatic alkaloids should be made more definite; and that certain tests which have been worked out for copaiba and balsam of Peru should be made official. It is evident, from the standpoint of the efficiency of the food and drugs act, that the larger the number of drugs described in the next Pharmacopeia the better, provided that the drugs are properly standardized. This proviso is of great importance, because the presence in the Pharmacopeia of drugs without standards, or with inadequate standards, is of little or no advantage so far as facilitating the execution of the law is concerned.

Other papers read at the meeting were: "Hexamethylenamin in the Treatment of Otitis Media," by Dr. W. M. Barton, Washington, D. C.; "The Preparation of Tyroid Glands for Use," by Dr. S. P. Beebe, New York; "The Immediate and After Management of the Puerperant," by Dr. Jesse Sharp, Washington, D. C.; "Asthenia Universalis Congenita," by Dr. C. L. Green, St. Paul, Minn.; "The Further Use of Calcium Creosote in Medicine," by Dr. L. Kolipinski, Washington, D. C.; "Some Points in Bacterial Therapy," by Dr. F. E. Stewart, Philadelphia; "Bacterins; Their Present Status in Therapeutics," by Dr. N. P. Barnes, Washington, D. C.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Continued from page 1714)

Gall-Stones During Pregnancy and the Puerperium

Dr. Reuben Peterson, Ann Arbor, Mich.: Gall-stones are most commonly encountered in women between the ages of 20 and 35. Gall-stones are more common in women than in men. There are reasons for thinking that child-bearing has something to do with the frequency of gall-stones in women. This was borne out by finding that in 542 patients in whom the gall-bladder was palpated during the course of abdominal operations, gall-stones were found to be present in 64, or 11.8 per cent. The percentage of patients with gall-stones, who had borne one or more children, was 75, as against 65.7 per cent. in women who had no gall-stones. In the present series of pregnant patients with cholelithiasis, in nearly one-third of the cases the onset of the attack was at the fifth month of gestation, or at the time when the uterus is approaching the level of the umbilicus and beginning to crowd the intestines toward or on the bile passages. In the puerperal cases the onset of the attack in one-half of the cases was during the first seven days postpartum. Chills and elevation of temperature, associated with jaundice are frequent in gall-stones complicating pregnancy and the puerperium. In the series studied, there was a surprisingly large percentage of pregnant patients with jaundice, 15 out of 25, or 60 per cent. Only one out of the ten puerperal patients had jaundice. The operative mortality for the 23 pregnant patients was 13.04 per cent. The operative mortality in the puerperal cases with cholelithiasis was 11.1 per cent. In the pregnant patients with cholelithiasis more than one-half of the stones were in the gall-bladder alone; the same may be said of the puerperal cases. It is probable that there is no greater tendency for gall-stone operations to interrupt pregnancy than is the case with other abdominal operations during various periods of gestation. It is advisable, when cholelithiasis complicates pregnancy and the puerperium, to choose the operative procedure which can be performed in the shortest possible time consistent with the existing conditions. The condition of the pregnant patient as regards the cholelithiasis should be the determining factor as to when the operation should be performed; whenever possible the operation should be postponed until the child is viable. The diagnosis of cholelithiasis during pregnancy and the puerperium will not be difficult in typical cases if the possibility of the complication be borne in mind. Much reliance can be placed on the jaundice which seems to be more prevalent in pregnant than in non-pregnant women with gall-stones.

DISCUSSION

Dr. W. F. Wakefield, San Francisco: The relationship between pregnancy and gall-stones is interesting. I believe that a large percentage of women have gall-stones, and the curious thing is that in carefully studying the histories of these women in a large percentage of them I could trace the beginning of the symptoms to pregnancy. I think that about 75 per cent. of the women who complain of symptoms of gall-stone disease will date the beginning of those symptoms back to pregnancy. As gynecologists we are neglecting the gall-bladder. The gall-bladder should be examined every time we open the abdomen, and every time we find stones in the gall-bladder they should be removed at that time. It is a mistake to operate on gall-stones during pregnancy if it can be avoided.

Dr. Philander A. Harris, Paterson, N. J.: Any one who operates for gall-stone disease in the course of pregnancy may well wonder whether it is right to do the operation at that time or not, but as near as I can understand from the cases reported, I do not think the decision should depend on whether the patient is pregnant or not. I think the decision should be governed by such other conditions as would govern us in the removal of gall-stones or gall-stone disease, no matter whether it occurred in connection with pregnancy or not.

Dr. Lapthorn Smith, Montreal: I question whether it would be a good thing to operate on a woman for gall-stones who is six months advanced in pregnancy. I think that it is not a good thing to do so at that time because the size of the uterus makes the operation difficult. The pregnant woman should be carried along with morphin and other treatment until she has been delivered, and then she should be operated on for gall-stones.

Dr. W. G. Wylie, New York: I have been watching the gall-bladder whenever I have opened the abdomen through an incision large enough to introduce my hand, and I have found that the percentage of gall-stones is much greater than I had expected. Whenever the gall-bladder is distended with fluid there will be nausea and vomiting after operation, almost without exception in my experience, and when it is flaccid and empty, vomiting is rarely ever severe.

Dr. H. N. Vineberg, New York: A few years ago I was called in consultation in a case of supposed puerperal sepsis. The woman had been delivered ten days before. She was very ill; had a temperature of from 104 to 105 F.; pulse, 120, and complained of pain in the lower part of the abdomen on the right side. She had given no history of gall-stone attacks prior to that so far as one could learn. I examined her carefully and came to the conclusion that the trouble was not with the pelvic organs. I went higher and found a distended gall-bladder. She was transferred to the hospital, was operated on, and the gall-bladder was found full of small stones, with mucopurulent fluid. The woman made a good recovery. I do not agree with Dr. Smith as to the non-advisability of operating on some of these patients during pregnancy.

Dr. Henry T. Byford, Chicago: Undoubtedly many women have gall-stones and may have had them for a long time, pregnancy being merely the cause of the first recognizable symptoms.

Dr. John F. Thompson, Portland, Me.: In January, in my service, I had referred to me from the medical side a patient who was supposed to have had perforation from a duodenal ulcer. The period of illness was about 24 hours. The patient had considerable temperature, and was 3 or 4 months pregnant. The soreness, pain and tenderness gave indications as to the point of election for making the incision. I found perforation of the gall-bladder with stones and pus and some bile, which fortunately were shut off by folds of omentum. The operation was uncomplicated; adhesions were not very dense. With the scissors I removed the edges of the perforation, drained the gall-bladder, and the patient had no interference whatever with pregnancy.

Dr. Henry Hough, New Bedford, Mass.: A month ago I was called in consultation to see a woman in a moribund condition. She had been delivered about ten days before. The first week of convalescence was normal, then symptoms pointed to acute cholecystitis. As the woman was moribund no operation was done. After death several quarts of deeply bile-stained fluid were removed from the abdominal cavity which demonstrated the nature of the case. I have operated in two cases of gall-stones during pregnancy. One in a woman of 23 who was 2 months' pregnant; she had stones in the gall-bladder and in the duct. She also had chronic pancreatitis. When I operated she had just recovered from an attack of acute pancreatitis, as was evidenced by extensive fat necrosis in the omentum. Drainage and removal of the stones resulted in a cure. About one month after operation she was delivered of a three-months' fetus. The other woman was 5 months' pregnant and had acute cholecystitis with gall-stones in the gall-bladder. The gall-stones were removed and she made a prompt recovery, with drainage, and went on to full term.

Dr. Richard C. Norris, Philadelphia: Operations for gall-stones during pregnancy should be determined by the character of the cases. If the case is an aggravated one, the woman should be relieved of the gall-stones independent of the pregnancy, but if it is a case in which we can tide the patient over until labor has been accomplished, it is better to do so. We should apply the same principles of surgery to gall-stones associated with pregnancy as we would to women independent of pregnancy.

Dr. R. Peterson: Dr. Norris has presented in a few words the inevitable conclusion that we must operate on these pregnant women and also on the puerperal woman according to the conditions presented by the gall-stones.

Anastomotic Repair of the Ureter

Dr. Malcolm McLean, New York, said that cases may occur in which end-to-end anastomosis is desirable and preferable to implantation into a slit wound. He described a method which offers a means of securing anastomosis, and at the same time providing for the safe conduct of the urine past the point of repair during the first critical hours after the operation.

President's Address: American Gynecology

Dr. Edward P. Davis, Philadelphia: American gynecology had its origin in the crude obstetric practice of fifty years ago. The necessity for repairing the injuries of labor developed the genius of Sims and Emmet, and American ingenuity added a new branch to surgical science. As obstetric surgery has developed and asepsis was introduced, gynecology has become more and more abdominal surgery. This has been the case not only because better knowledge of obstetrics has lessened the injuries of labor, but because women have those abdominal lesions most easily recognized and most frequently occurring. At present, the modern gynecologist operates on men and women alike, the surgeon in turn performing many operations on women. To-day the tendency of development in gynecology lies in the study of the normal relations of the abdominal and pelvic viscera, the determination of the dynamics of the abdomen and pelvis, and the recognition of those causes which produce abdominal and pelvic ptosis. We have learned that the repair of lacerations of the genital tract does not suffice to cure these cases. The pelvic viscera must be brought into such relation with the abdomen and its contents that the dynamics of the abdomen shall maintain health for the individual, and not disease. Modern surgery having conquered the world of technic, seeks other fields of conquest. The operation for cancer seems to have reached its anatomic limitations, but the cause of cancer remains unknown. Gynecology to-day is especially charged with the task of studying the cause and the mode of growth of malignant disease, so that operation may be wisely chosen and performed. The genital tract of woman gives opportunity to study pathologic processes closely akin to malignant disease. Such are the non-malignant degenerations of the generative organs, of which examples are found in autolysis of the uterus, changes in the Graafian follicles, and corpus luteum, necrobiosis in fibroids, and cystic and calcareous changes in ovarian and fibroid tumors. Protoplasm may thus be studied in its germinal and degenerative changes. The discovery of chorioepithelioma and its identification as a form of malignant disease serve to illustrate this point. Our knowledge of cancer to-day pauses at the phenomena of premature cellular death and degeneration.

In no branch of medicine has so great advance recently been made as in obstetrics. Pathologic chemistry has thrown new light on toxemia and eclampsia and lessened the frequency and mortality of these grave complications of parturition. Obstetrics offers abundant work for the future. Toxemia and eclampsia are but partly understood. It is still not proved that vaginal delivery, after opening the pelvic girdle, is not accompanied by such injuries that abdominal delivery is not better, and even in the repair of lacerations the final word has not yet been spoken. It is still an open question whether in puerperal sepsis we can do more than feed and stimulate the patient. To us is entrusted the physical care of woman in her most important function—the conservation of the race. Our supreme reliance in national crises is the moral sense of the people. But how can this be done unless children be born with a sound brain in a healthy body and trained from the earliest days to a natural life and prompt obedience. If this republic is to endure, its women must bring to its altars not the paste jewels of an artificial luxury, but those gems which made immortal the mother of the Gracchi. Gyncology is an American science, of which America may well be proud. Let us see to it that it serves faithfully the land of its birth.

(To be continued)

SOUTH CAROLINA MEDICAL ASSOCIATION

Sixty-second Annual Meeting, held at Laurens, April 19-21, 1910

The officers elected were noted in The Journal, May 7, page 1555.

Prevention of Blindness

In the House of Delegates Dr. C. W. Kollock, Charleston, made a plea for the enactment of the following bill:

"*Section 1.* Be it enacted by the General Assembly of the State of South Carolina, that should one or both eyes of an infant become red or inflamed at any time after birth, it shall be the duty of the midwife or nurse or person having charge of said infant to report the condition of the eyes at once to the local board of health or county physician of the community in which the parents of the infant reside.

"*Section 2.* That the Secretary of State shall cause a sufficient number of copies of this act to be printed, and supply the same to health officers and health committees, whose duty it shall be to furnish a copy to each person who is known to act as midwife or nurse in the cities and towns for which they have been appointed.

"*Section 3.* Any failure to comply with the provisions of this act shall be punishable by a fine not to exceed twenty-five dollars, or imprisonment not to exceed one month, or both."

President's Address: Need of More Thorough Education

Dr. John L. Dawson, Charleston: I wish to make a plea for the advancement of the education of the medical man. I desire to see in the State of South Carolina a better educated medical student. If you go to our dear old college and look back at its records you will find the theses which were required from students at their graduation and which have been kept by the college. They are remarkable and show a degree of learning that should make the medical student of the present day blush. Many of them are written in Latin, Greek, German and French, and show an amount of research and study beyond the average ability of our present class of applicants for a medical diploma. There are two reasons for this: the first, the men have not the money to take collegiate courses before taking up a medical course, and the second, the young men want to graduate too early. They study medicine to make a living only, by any means in their power, and if this state of things continues medicine will cease to be a profession and become a trade. The tendency is toward specialism, and the passing of that beautiful character, the family physician. In this present day the men in the profession are making a headlong rush after money and reputation, and they have not time for general education. We often hear men say that the study of the dead languages is not necessary for the study of medicine, and that the study of modern languages is not absolutely essential. How many young men starting out to study medicine ever think of studying along other lines? Is the average medical student of to-day the possessor of even an ordinary education, attainable at a high school of college? Money is essential to existence, and the medical man must make his living by his brain and skill, equally as well as the laborer by his muscle and brawn; but brain without cultivation is a poor possession, and the skill of the uneducated is looked on with suspicion. Many of our young men go into medicine for a living too hastily, and as a result we have an overcrowding of the profession.

Every man who raises a son for any profession in life should start with an early education of the boy. Training for the chosen profession should commence with the earliest school days. It would be a splendid thing if each one of us had taken up some special line of study along with medicine—music, art, literature or the languages—whatever is our bent. One needs more than his profession alone to shine in a company of cultivated people. An educated man in a community must elevate the people with whom he associates, and his cultivation raises him in the estimation of his inferiors and he can thereby accomplish much good; it makes his work more acceptable to his equals; it maintains his own self respect. No matter how good a physician one is, how able a surgeon, he needs something more. Cultivation stands for mental gentility. I would suggest that our boards of medical examiners take the matter in their own hands and correct this evil. They should be equally as well qualified to judge of a candidate's general preliminary education and fitness to apply for a degree in medicine as they are to judge of his medical education only. I suggest that this association take this matter up for serious consideration.

Serotherapy of Epidemic Cerebrospinal Meningitis

Dr. Charles Hunter Dunn, Boston: Flexner, as one of the committee appointed by the New York health department, investigated the epidemic of 1904 and made a careful study of the pathogenic properties of the diplococcus, showing its brief vitality in cultures, its wide variation in virulence and the rapid autolysis produced by an enzeme which is distinct from the intracellular toxin. Flexner's first experimental work on monkeys and some of the other lower animals did not seem very encouraging toward producing an antiserum, for endotoxins rarely produce sufficient antibodies to neutralize the toxin in an acute infection. But as the diplococcus is easily influenced by unfavorable conditions, and as the curative agent can be applied directly to the lesions, it seemed possible that serotherapy might be successful. It was next demonstrated that immune serum from monkeys would protect infected monkeys. Then a horse was immunized and its serum used for man, as follows: after lumbar puncture, inject through the same needle a quantity of serum equal to the amount of spinal fluid withdrawn. This procedure is carried out on four successive days.

An analysis of 400 cases by Flexner and Jobling shows that the serum treatment of meningitis reduces the mortality from 75 to 25 per cent. This serum is not on the market. It may be obtained without cost from the Rockefeller Institute by anyone who can satisfy Dr. Flexner as to his agility to use it properly, to make the necessary bacteriologic examinations, and to send in an accurate clinical report. Of course, the amount of serum is limited and cannot supply the whole country.

In my series of 86 cases, embracing all types of the disease, 72 per cent. of the patients recovered. These cases, as well as those analyzed by Flexner, show strikingly the advantage of the early use of the serum. Ordinarily, the vomiting, high temperature and mental symptoms disappear rapidly, leaving the rigidity of the neck and Kernig's sign to subside gradually.

The diplococci in the spinal fluid at first become intracellular and then disappear entirely. And last but not least, the occurrence of the much-dreaded sequelæ is greatly diminished.

Pulmonary Tuberculosis: The Persistent Need of Earlier Diagnosis

Dr. L. B. Morse, Hendersonville, made a strong appeal for earlier diagnosis of tuberculosis, rather than a reiteration of the means by which such diagnosis is made. He emphasized the fact that, in spite of all that has been written in recent years, the average physician does not diagnose pulmonary tuberculosis in its incipiency. The reasons ascribed were believed to be largely personal. Timidity in sufficiently exposing the patients to examine them properly was thought to be a common reason for not carefully examining individuals. He condemned the idea that patients do not want exhaustive examinations, and that examinations render patients oversolicitous and introspective. Patients should be told frankly the facts in these cases, as insuring a closer obedience to the necessary change in the mode of life so essential to a cure. Lastly, he enumerated the conditions of life, and of the individual, wherein a careful man would be more apt to look for tuberculosis.

Dont's in Medicine and Surgery

Dr. Walter Cheyne, Sumter, read the following axioms:

1. Don't fail to make an exhaustive physical examination in every patient who comes to you. This means heart, lungs, liver, kidneys, abdominal palpation, urine and sputum, when necessary. Your error may not only mean the loss of your reputation, but also the death of your patient.
2. Don't delay an operation for appendicitis after the diagnosis has been made. Don't be influenced by ignorant people to wait until the patient is in danger of death. Pus walled off or walled in you will drain. The removal of the appendix in most cases may be deferred when drainage is established.
3. Don't think an examination of urine is made by intuition. Fresh reagents, exact methods which certainly include filtration, are necessary for you to make a positive statement to an insurance company or to a patient.
4. Don't be surgically careless after a pus case; disinfect as you would after a post-mortem. Pus clings to all tissues; pus germs are not harder to kill than most other germs; therefore, take proper precautions to kill them on your hands and on the places where they originated, if possible.
5. Don't claim to know every skin eruption you see. Perhaps five men in the United States do know such eruptions. If you are doubtful, say so; it won't hurt you, and may do the patient good.
6. Don't tell a man he is cured of gonorrhea unless you know. If you don't know and you tell him he is cured, you may cause a woman's death.
7. Don't think you know all medicine and surgery until you have studied the methods in seven different cities and have practiced conscientiously for twenty-five years. Even then you may turn over in bed at night several times and have doubts as to your knowledge.
8. Don't feed poll-parrot style in typhoid fever. You can starve a patient to death in typhoid as well as have the fever kill him. Anemia must be combated as well as the fever. Better higher fever than a feeble heart.
9. Don't forget that scientific knowledge, added to scientific equipment, plus a practical knowledge of human nature, are the trio necessary to professional success.
10. Don't minimize the value of membership in a medical society. The charlatan cannot get in. Count the number of successful professional men you know who are not members of their state association.
11. Don't use a drug, unless you know it is necessary. If in doubt, leave out the medicine.
12. Don't forget in medicine or surgery the Golden Rule, "Do unto others as you would that they should do unto you."

The Present Status of Cancer Education

Dr. Southgate Leigh, Norfolk, Va., chairman of the Committee on Cancer Education of the Tri-State Medical Association of the Carolinas and Virginia, appeared before the society chiefly for the purpose of enlisting the cooperation of its members in the campaign of cancer education which the committee is instituting in these states. He called attention to the nature of cancer, its wide prevalence and its incurability in the later stages. Cancer, he said, is preventable or curable in at least 95 per cent. of cases if taken in time, and yet, largely from ignorance and misunderstanding on the part of the public, 90 per cent. of cancer patients die. The real problem is the education of the profession and public alike in the prophylaxis and early treatment. He called attention to the good work of the American Medical Association in disseminating knowledge about "cancer quacks," briefly reviewed the work done by Winter in Koenigsberg, Germany, and referred to various papers published in this country. He also discussed the advisability of disseminating useful information to the public through boards of health, public clinics and women's societies, by distribution of circulars, and also by appropriate articles in public press. He emphasized the fact that the hearty cooperation of the general practitioner was most important.

Things the Profession Should Know About Cancer

Dr. Le Grand Guerry, Columbia, read a paper on this subject.

DISCUSSION

Dr. J. S. Horsley, Richmond, Va.: The earlier the diagnosis is made, the more difficult it is, but the greater the patient's chance of being cured. Anyone could make the diagnosis in the late stages, but then the case is inoperable and diagnosis can be of no avail. Statistics have shown that the opportunity for cure of cancer by operation decreases with the advance of the disease in almost mathematical precision. For instance, if a cancer of the breast is taken in the early stage, before the involvement of the skin or the glands, radical operation will cure permanently more than 75 per cent. By cure is meant that these patients are well without recurrence 3 years or more after the operation. When the glands in the axilla are involved the percentage drops to 35 per cent. When, in addition to this the skin is involved, the ratio of cure is less than 20 per cent. When the supraclavicular glands become affected there are only from 5 to 10 per cent. of patients cured, and operation is hardly justifiable. Each of these stages represents a definite state in the progress of cancer, which results from delayed operations. It is the duty of the physician to insist on every patient with a growth, the nature of which he does not know, being examined and the diagnosis definitely determined. If he waits until the tumor "develops" he is sacrificing the patient's chances of life with every day's delay. The most prominent single symptom of cancer is the absence of pain. A patient will rush to a doctor with a boil because of pain, but with a growing cancer, which gives no pain until the late stages, the patient will frequently delay consulting a physician until it is too late. If people could be brought to learn that a tumor without pain is more dangerous than a growth with pain, many more lives could be saved. Exploratory incisions for diagnosis of doubtful tumors is always dangerous, unless immediately followed by radical operation. The surgeon should study his own tumors and be his own pathologist, by noting the appearance of the growth at the operating table and following it through the laboratory, noting its microscopic appearance, he will be in a position to decide the nature of a similar tumor the next time he meets it at the operating table, for he will recall the microscopic picture of other tumors that looked and felt like the one he is dealing with. The surgeon should carry practical knowledge of pathology in his own head, and not in the head of some one else, for delay in the pathologic report frequently means that the patient has lost the only chance for permanent cure.

A Plea for Medical Inspection of School Children in South Carolina: Report of the Work at Seneca

Dr. E. A. Hines, Seneca: While medical inspection of schools has made rapid progress in many parts of the world, the southern states appear not to have become interested until very recently. New Orleans and Atlanta each inaugurated medical inspection in 1909. Seneca was the first place in South Carolina to put in operation such a system, Sept. 23, 1909. The examining board consisted of two general practitioners, two dentists, an eye and ear, nose and throat specialist and a secretary. This combination, with the assistance of the teaching staff at times, resulted in a thorough examination. In all the more serious cases the children were treated by or on the advice of the family physicians. I examined also a representative number of negro school children; 90 per cent. had bad teeth, skin diseases very prevalent, but other defects were similar in general to the whites. I also examined a representative number of cotton mill operatives' children; 90 per cent. of these had bad teeth; not one had a tooth-brush. Other defects were not very different from previous reports. Laws should be enacted looking to enforced medical inspection in South Carolina.

An Epidemic of Beriberi at Convict Stockade, Ten-Mile Hill, Charles County

Dr. Allen J. Jervey, Charleston: Early in March there developed within a fortnight 17 cases, which were diagnosed beriberi, and the patients sent to the state penitentiary as unfit for work on the county roads and as possible sources of infection to the remaining 14 prisoners. They presented about the following pictures: An edema, starting in most cases about the calves of the legs, with some pain, numbness and paresthesia in this region. The edema was not of the boggy type, but seemed resistant to pressure, and extended rapidly until in the most marked cases it had involved thighs, abdomen, scrotum, front of chest and face. The onset was accompanied with a general feeling of lassitude rather than a distinct malaise. Temperature normal; urine negative. In the more advanced cases there was accelerated pulse, or a pulse which after the least exertion would reach 120 and over. These individuals showed a dilated heart and it was hard to distinguish the heart sounds. Relative murmurs and venous pulsations in the neck were observed. The gait was tired, slow and dragging, but there was no ankle-drop or wrist-drop. Knee-jerk was diminished or lost; in one case noted it was increased. Hookworm ova were found in two out of three patients examined; no other intestinal parasites were noted. One-half of the patients showed white fur coating on tongue. There was a general tendency to constipation.

Is beriberi a new disease here, and what is the source of the infection? I think that beriberi is and has been for several years an endemic disease in the low lands of South Carolina. During the past two years I have seen three distinct outbreaks of what I now know to be beriberi. This statement is borne out by my inspection of the previous attending physicians' records, in which I find beriberi called by various names, as "malaria," "acute nephritis," "cellulitis of legs," "myositis," "undiagnosed," "swollen limbs" and "dropsy." The first patient I treated, in 1908, was very anemic and, finding hookworms, I gave thymol and iron, which brought about marked improvement, but possibly the moving of the camp to a higher elevation may have had something to do with the improvement. In September and October there were two deaths, the first from edema of the lungs as the immediate cause, and the second, rather sudden, possibly from involvement of the vagus. He had been complaining for a few days, had edema and pain in the calves of the legs, but did not stop work. Careful postmortem revealed only an increased amount of fluid in the pericardium and abdomen. Four of my patients went to Columbia and the condition was diagnosed by Dr. Pope as identical with that in patients who come up from the phosphate fields and which was spoken of as "phosphate sickness."

The cause of the infection is yet in a theoretical state. The convict camps are high, sanitary and dry, and are well ventilated. The drinking water is pure. The rice theory does not apply, as rice is excluded from the dietary of the convicts. We have in this camp neither heat nor moisture—supposed to be the cause of this disease. Prior to these outbreaks one gang, composed of the more intelligent negroes, who handled the animals and the road machines, was known as the road gang; the others were concerned with the drainage work chiefly; and their duty is ditching water of various depths in the low, foul bottoms that need drainage. The first ones attacked in each outbreak belonged to the ditching gang, and the symptoms appeared about six weeks after each exposure.

DISCUSSION

Dr. J. C. Sosnowski, Charleston: There are two types of beriberi—the wet and the dry. As an intern in the city hospital at Charleston six years ago I had the good fortune to see an epidemic of beriberi of the dry type. This epidemic occurred on a ship coming from Chili. When the vessel reached Charleston 19 men were infected and 1 died. Most of them had a slight toe-drop and some paresthesia and numbness; but 4 of these were very ill. The one who died developed sometime before he died a marked diarrhea, which nothing could check. The next spring, in the same neighborhood in which Dr. Jervey found his cases, I found a case of multiple neuritis of the dropsical type. I could not make diagnosis of beriberi, as I had only one case, although I thought it was that. The patient told me, however, that there were several similar cases in that neighborhood. Since then I have heard of an epidemic of dropsy. I think the disease has been with us for a long time, and those affected in this neighborhood seem to have the wet type, which would lead us to suspect there are two varieties, not only clinically but etiologically. I think it is probable that when we find the cause we will find that this is an infectious disease. I have heard that there have been epidemics of dropsy throughout the low country for several years, and it is most probably the same disease. I think, as does Dr. Jervey, that the line for us to follow would be to search for some agent of transmission which lives in the ditch water, because every case which we have seen has developed among the negroes who have worked in the mines or ditches.

What Has Been Done for the Prevention of the Increase of Blindness, and What Can Be Done

Dr. Charles W. Kollock, Charleston, cited the work which has been done in various states, mentioning especially New York, Massachusetts and Ohio. He gave an account of the good work that is being carried on by the New York Association for the Prevention of Blindness, and dwelt especially on the literature that is being widely distributed to the laity, the public lectures delivered and the amount ($5,000) that was appropriated by New York State for this work last year. He quoted the law of South Carolina for the care of new-born infants whose eyes should become inflamed after birth, and criticized it because it applied to cities and towns of 1,000 inhabitants and over and not to the whole state. He urged the amendment of this law at the next meeting of the association, so that it would apply to the entire state. He quoted the statistics of blind persons in various blind institutions who had been blind since birth, and among them that of the institutions at Cedar Springs, S. C., where out of 78 persons 23 have been blind since birth. He spoke of the large negro population in South Carolina, among whom eye diseases are rife and who are eminently careless in all health matters. He urged strict laws and education for these people. He quoted the number of births in Charleston from July 1 to Dec. 31, 1909, that of 213 whites 155 were attended by physicians and 58 by midwives. Out of 225 colored births 30 were attended by physicians and 195 by midwives. He mentioned that those midwives were not only ignorant, conceited, dirty, but very superstitious, and that more stringent laws should govern them. He said that all contagious and infectious diseases should be reported to the health office, according to existing laws, but doubted if we were ready to report a case of gonorrhea or syphilis or gonorrheal ophthalmia, but that there could be no doubt that publicity would lessen the number of cases. He declared that it was a shame that innocent women should be exposed to the danger of those diseases and that every man who desired to marry should be made to present a clean bill of health before obtaining a marriage license.

Uncinariasis in the Negro

Dr. W. J. Burdell, Lugoff, gave some interesting statistics in regard to hookworm in the negro. His tests were as follows:

Total number of stools examined, 226, from as many individuals. Hookworm ova in from 145 to 65 per cent.; persons examined ranging from 2 to 60 years.

Stools from 178 persons under 20 years of age, 126 contained hookworm ova, 70 per cent.

Three men over 50 years of age showed hookworm ova. They came from the clay lands of South Carolina; 200 individuals presented no symptoms of any disease; 5 were tuberculous and all these had hookworm; 21 "rickety" children under 5 years of age were infected with hookworm.

Of the 226 there was a history of ground itch in 190 cases, 84 per cent.; all went barefoot in summer.

Of 92 girls under 20, 61 were infected; of 86 boys, 65 were infected; 8 men and 11 women over 20 were infected.

He was treating the 5 tuberculous patients as nearly according to the recognized modern method as possible, with this class of patients, and getting very poor results. After finding the ova and removing the worms, three have greatly improved. While not claiming that tuberculosis can be cured by thymol, he stated that one of the reasons tuberculosis is so prevalent, and its course so rapid in the negro, is the fact that he has uncinariasis in what may be called a latent form, and tuberculosis or any other infection may overcome the partial immunity the race has acquired for hookworm, and hence there is a double infection. In the sand-hill district of South Carolina about 65 per cent. of all the negroes have hookworm; uncinariasis is latent in a majority of the negro race, and in the presence of other infections the uncinariasis becomes active and lessens the natural resistence. Uncinariasis plays an important rôle in the causation of rickets in the very young negro child. Hookworm is one of the first causes of the high mortality from tuberculosis in the negro race.

Report of a Case of Appendicostomy by a Method Devised by Dr. Pettyjohn of the Marine-Hospital Service

DR. L. A. GRIFFITH, Columbia: This operation was first reported by Dr. Pettyjohn in THE JOURNAL A. M. A., March 14, 1910. The abdomen is opened over the right border of the right rectus muscle, the appendix located, a stab wound made over the appendix and the appendix drawn through this stab wound. The abdominal cavity is quickly and effectively walled off. The appendiceal stump is short and straight. Irrigation can be begun at once. This method has all the advantages of appendicostomy as heretofore done, without the bad features. With this method it does not matter if the stump sloughs, and if a cecostomy is indicated this incision of Dr. Pettyjohn's is the most desirable. The danger of hernia and infection is greatly reduced. In the case reported the patient was probably syphilitic. Improvement was rapid, though he had not responded to medical treatment, and had been ill with dysentery more than one year.

DISCUSSION

DR. J. SHELTON HORSLEY, Richmond, Va.: Cecostomy has an advantage that appendicostomy does not present. The chief advantage, it seems to me, is the location of the cecum, which is in many cases in proximity to the anterior abdominal wall. The appendix has no definite location, but it is more frequently than otherwise found behind the cecum, and in order to bring it up, as Dr. Reed has pointed out, it is necessary to turn over the cecum, which makes a kink or valve and interferes with drainage. It seems to me that we are too likely to look on the appendix as something that has to be made some use of, besides securing the surgeon a fee, and it would probably be a little more preferable to take off the appendix in those cases and treat the stump, simply; tie a string around it without a purse-string suture, which cuts off the blood supply and complicates matters unnecessarily. Let the cecum fall back and bring up the anterior wall of the cecum, make a hole in it, put a purse-string suture around the hole, insert a rubber tube, tie the purse-string, and we have drainage which is very much better and more direct.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Annual Session, held at Mobile, April 19, 1910

The President, DR. W. M. WILKERSON, Montgomery,
in the Chair

A list of the officers elected was given in THE JOURNAL, May 7, 1910, p. 1549.

Uterine Fibroids Complicating Pregnancy

DR. R. S. HILL, Montgomery: Although these tumors are found in 20 per cent. of women beyond 30 years of age by postmortem examination, Pinard found them in only 84 cases out of 14,000 pregnancies. The reason for the latter is that the ordinary obstetric examination does not reveal the presence of the tumors unless of considerable size, and that many women with them never conceive. The diseased condition of the tubes, which is present in 50 per cent. of these women, is responsible for the increased sterility and the frequency of ectopic pregnancy in these women. Abortions, which are frequent, are due more to abnormal changes in the uterine endometrium than to pressure of the tumor. The tumor is liable to undergo degenerative changes, simple or sarcomatous. I do not think that the tumor ever disappears, although it may flatten out, if intramural, as pregnancy advances and give the impression of having done so. In treatment, I would oppose abortion on the grounds that it is not curative, and on account of the liability of infection and hemorrhage, making it about as dangerous as the more radical operations. Myomectomy should be done whenever possible. Not only subserous but intramural tumors may be removed by myomectomy. Should hemorrhage become uncontrollable, or should there be a number of tumors present, hysterectomy should be done. However, no operation should be undertaken if the tumor is out of the pelvis or can be lifted out, provided the woman can be kept where surgical measures can be instituted on short notice should conditions arise calling for them.

DISCUSSION

DR. M. E. CONWAY, Talladega: Some time ago I had a case of fibroid tumor of the uterus which was complicated by placenta prævia. I reached the woman in about twenty-two minutes after I was called and found an alarming hemorrhage. As she was likely to die from hemorrhage, I split the wall of the uterus up to the uterine artery and delivered a seven-months' child. The child is living to-day. The tumor I removed was pedunculated, but the operation was done subsequently and not at the time the child was delivered.

DR. I. L. WATKINS, Montgomery: It is essential to make an accurate diagnosis and determine the location and character of the tumor which complicates pregnancy. A careful examination should always be made of patients who have fibroid tumor or tumors complicating pregnancy. Such a patient should be kept under constant observation and attended to promptly if necessary. Women with good-sized fibroid tumors in the uterus are delivered of babies but sooner or later it may become necessary to operate on some of them for the removal of the tumors in order that pregnancy may go on to term. When a fibroid tumor so interferes with pregnancy as to cause alarming symptoms it should be removed, as temporizing treatment only increases the possibility of infection.

DR. A. L. STAVELY, Washington, D. C.: With regard to myomectomy, I believe in being rather conservative in the treatment of these cases in which the tumor involves the fundus or upper part of the uterus, or even when there is a pelvic growth. I think it is well to wait until pregnancy is well-advanced because these tumors will sometimes rise in the pelvis and labor will terminate without any complications. I operated on one woman in the seventh month of pregnancy for the removal of a large sessile tumor at the base of the uterus or cervical junction. To get at it, I had to raise the uterus from its bed, and then enucleated the tumor.

Opsonin and Immune Sera

DR. H. T. LAY, Montgomery: A moderate dose of vaccine, such as would generally be the most useful dose in connection with a chronic infection produces, after a comparatively short negative phase, a positive phase, which may occur on an average and extend over the interval between two successive inoculations undertaken about ten days apart. A smaller dose would produce an immediate positive phase, but a positive phase would not be maintained for more than a very few days. An excessive dose would produce a negative phase which would last through a large part, if not through the whole of the interval, which usually elapses between the two inoculations.

Nausea of Pregnancy

DR. GEORGE H. FONDE, Mobile: To present the treatment and its principles, I shall recount the salient features of the Lenhartz treatment for peptic ulcer, which, in the treatment of nausea of pregnancy will call for such modifications as the individual condition of the patient and the principles mentioned may logically determine: First, the patient should rest in bed, with an ice-bag over the stomach, the object being to bring about general rest, and especially of the dynamic and secretory action of the stomach. Second, sweet milk containing a tablespoonful of lime water to the goblet of milk—two tablespoonfuls at each feeding—should be given every hour; the patient should be given the food from a teaspoon and not allowed to feed herself. The milk should be packed neatly in ice, and administered ice cold. Each day the quantity of milk given may be increased by two tablespoonfuls at each feeding—there should be two-hour intervals, in feeding at night. By this increase it is but a short time before the patient is getting three or more quarts of milk daily. In the Lenhartz diet on the third day raw eggs are stirred in the milk, and thereafter on every third day an additional article of diet is added until the patient is given much more food than is needed for the average workman, with the result that the general strength and weight, together with greater resistance of the patient to all morbid conditions obtains, especially in vomiting of the nervous and functional type, such as we so frequently have in the nausea of pregnancy. The objects of these measures in the Lenhartz treatment are obviously explained on a physiologic basis. The excessively and constantly secreted acid gastric juice is neutralized by the milk, forming a bland peptone which soothes the stomach mucosa. The intolerance of the stomach to any solid or any volume is gradually overcome by the minute feedings so gradually increased. The patient being fed by the nurse rather than allowed to feed herself, together with the frequency of feedings, satiates the craving and lowers the psychic stimulus to gastric secretion, which is a great factor in pregnancy as in ordinary hyperchlorhydria. The liver, kidneys and heart and, in fact, the entire system are spared the irritation of toxic matters formed in the stomach and duodenum; while the system is being best nourished, the emunctories are being flushed and nurtured. When combating the hyperchlorhydria by the frequent sips of milk in small quantities, it will generally not be necessary to deny the patient regular meals, but as the periodic flow of gastric fluid attendant on regular meals is often in excess of the albuminous coefficient contained in such meals it is my experience that the patient will need to take the iced milk in teaspoonful sips within a very few minutes after the regular meals. In the treatment of such disorders of pregnancy, I would not overlook the value later of general hygienic and dietetic measures, with fresh air, exercise, and agreeable occupation whenever the condition of the patient will permit.

DISCUSSION

Dr. George E. Pettey, Memphis: A certain number of women die from excessive vomiting at pregnancy. I give strychnin to keep up active peristalsis, then ipecac and a little belladonna, and some of the secretion-producing agents to overcome the acid condition of the stomach, which does not appear again to amount to anything so long as active peristalsis is kept up.

Dr. J. S. McLester, Birmingham: The livers of patients who die from the toxemia of pregnancy show changes similar to those observed in acute yellow atrophy of the liver. I believe that the absorption of toxins from the intestinal tract is the primary cause of the condition.

Dr. H. S. Ward, Birmingham: Vomiting of pregnancy, acute yellow atrophy of the liver, and acidosis are so blended one into the other that it is difficult to think of one without thinking of the other. Within three days after vomiting sets in in the pregnant woman one is able to detect acetone in the urine, and if starvation continues many days more, one is almost sure to begin to have autolysis of the liver cells, with all the bad symptoms coming on with an absolute condition of acidosis. This condition is found not only in pregnancy, but in typhoid.

Diagnosis of Painful and Swollen Joints in Children

Dr. J. Ross Snyder, Birmingham: A diagnosis based on joint symptoms alone is entirely untrustworthy. There are few pathologic conditions that can be correctly diagnosed by an examination that includes only the site on which symptoms are most marked. Disease of the joints arising shortly after birth, that is, in the first weeks, and not later than the middle of the second month, is due to septic infection through the umbilicus or to a gonorrheal infection. A form of bone syphilis appearing shortly after birth, usually before the sixth week, is that of an osteochondritis or epiphysitis. The humerus, the radius, and the ulna are the bones most frequently affected, but the disease may appear at other places. In tuberculous knee joint disease there is warmth, obliteration of the depressions on either side of the ligamentum patellæ and atrophy of the thigh and leg, enough almost to confirm the suspicion aroused by the bent knee limp displayed by the child. The frequent mistake is to credit this lameness to injury and to allow the condition to remain without being kept under close observation or treatment. In the diagnosis of tubercular joint lesions, the *x*-ray is regarded of great assistance by some good men. Others equally prominent in the profession minimize its advantages. The tuberculin test is another diagnostic aid which is of disputed usefulness in this particular class of cases.

Chronic Gastromesenteric Ileus

Dr. A. L. Stavely, Washington, D. C., gave a brief summary of gastromesenteric ileus in general, its history, its anatomy, its etiology, and its treatment, and said in part:

In carefully reviewing the literature I have been able to collect 7 cases of the chronic type, including 2 of my own, all of which have been identified as cases of chronic gastroduodenal dilatation. A number of other cases were found in which gastric dilatation was recognized, and in which the symptoms corresponded very closely, but they were not sufficiently conclusive to justify classification. My first case followed an operation about 9 years before, and severe symptoms continued up to the time the woman came under my care in 1907. I anastomosed the duodenum with the jejunum anterior to the mesenteric ligament with complete relief from the symptoms. This is the first time such an operation has been performed for this trouble. The second case was a mixed one due to the presence of a gall-stone, which masked the symptoms. The gall-stone was removed and for a time, until the patient left the hospital, she was free from any discomfort. Then the symptoms recurred intermittently for two weeks at a time up to the present. To try the effect of posture and also to strengthen the diagnosis, I had her take the knee-chest position when the stomach swelled and she reported that after about 10 minutes the symptoms had disappeared. In my table I include 4 cases that are not verified, making 11 in all; 7 patients died of the condition; 4 had been operated on. There were 3 cures, one of them my own.

Treatment of Pneumonia

Dr. Henry Green, Dothan, summed up the treatment of this disease in the following words: A well-ventilated room, isolated as nearly as possible. Rigid prophylactic measures, such as disinfection of sputum and other excretions. The selection of the most intelligent nurse available and the limitation of company. Nourishment of the most palatable and easily digested sort, and medical treatment to be largely for the relief of conditions and symptoms that may arise.

DISCUSSION

Dr. J. F. Jenkins, Piper: I have noticed that many patients with pneumonia will recover if we leave them alone. Of course, we should pay attention to good ventilation, hygiene, nourishment, etc. Medicine should not be given to these patients in a routine manner, but only when symptoms arise. When the heart is weak, strophanthus or strychnin is indicated, and when the skin is bluish nitroglycerin may be used.

Dr. L. W. Roe, Mobile: There is one standard for the treatment of pneumonia, and that is fresh air. Several years ago, when I was practicing medicine in a milling camp, I had the misfortune to have a great many cases of pneumonia among negroes. These negroes were placed in log cabins or rudely constructed houses, and in the winter there was no means of procuring anything like a warm room, regardless of what I did these patients recovered.

Dr. Hugh Boyd, Scottsboro: The prophylaxis of pneumonia is a little different in the city from what it is in the country. People in the city have a better system of health laws and carry them out better than do the country people. Country people need to be educated in regard to the dangers of pneumonia, and when there is a case of pneumonia in the house the rooms ought to be fumigated afterward just as much as after typhoid or tuberculosis. When there is a weakened condition of the heart it is well to use digitalis.

Dr. J. S. McLester, Birmingham: Fresh air is the main thing in the treatment of pneumonia. The toxin of pneumonia seems to have a special affinity for certain nerve centers. It affects the Gasserian ganglion. In certain cases it causes paralysis of the splanchnic nerve and complete loss of vasomotor tone in the abdominal cavity.

Dr. Frank S. Meara, New York: In New York we put patients with pneumonia out of doors. When treating them in the hospital we open all windows wide and properly cover the patients, and they do remarkably well with fresh air treatment.

Dr. Henry Borst, Silver Hill: A good deal of harm is done patients with pneumonia from indiscriminate visiting and in robbing these patients of the fresh air which they should have.

Dr. R. M. Cunningham, Birmingham: Pneumonia is an infectious disease. Over-work, mental anxiety, exposure to cold, and other things which reduce the resistance of the body invite the pneumococcus. In the treatment one should start in with the idea that pneumonia is a self-limited, infectious, toxemic condition, with the resisting power of the body diminished. The factors which contribute to heart failure in pneumonia are toxemia, increased work that the right side of the heart has to do because of the consolidated condition of the lung, and heart clots. One of the most important things to prevent cardiac thrombi and to overcome exhaustion and collapse is the infusion of salt solution.

Value of Employment as Treatment in Certain Neuroses and Psychoses

Dr. William D. Partlow, Tuscaloosa: Employment is of considerable value in the treatment of those mental and nervous states in which worry, anxiety and kindred sensations are present, because it provides mental diversion and promotes physical health.

DISCUSSION

Dr. H. S. Ward, Birmingham: If we can find something that will interest these people, something that will get them out of themselves, they will forget their aches and pains. Those nervous people who are broken down from over-work are suitable for the rest cure.

Pellagra

Dr. E. M. Mason, Montgomery, gave a brief summary of the present knowledge of pellagra. He briefly outlined the morbid anatomy, and in discussing the symptoms called attention to the extreme variability in onset and sequence, as well as severity. A low temperature, he said, was not unusual, associated, as a rule, with a disproportionately high pulse rate. He reported the results of blood examinations in a number of cases. These blood cultures had been uniformly sterile. The blood picture had shown nothing more than a secondary anemia, as a rule. He warned against accepting a large mononuclear increase as caused by pellagra without first excluding malaria, and uttered a similar warning with reference to helminthiasis in cases that show eosinophilia. He pointed out the ease of diagnosis in typical cases, but warned against hasty diagnosis in unusual forms, and mentioned the diseases that may have to be excluded. He though that a lower death-rate than the asylum reports of 60 per cent. might be expected in early, uncomplicated cases, in private practice. There was no specific medication for the disease he said, but much might be expected from good food, rest, proper hygiene and change to cold, dry climate. Arsenic was to be preferred to other drugs. Only mildly antiseptic lotions should be used for the skin lesion. Cold baths, packs and douches should be used for the nervous manifestations. Serum therapy had been disappointing and little was to be expected from it. Finally, he called attention to pellagraphobia as a condition that he had frequently seen in both men and women, and advised a spirit of cheerfulness and optimism on the part of the physician in order to counteract the hopelessness and despondency that the popular dread of the disease had engendered in the minds of the people at large. His personal experience embraced the study of about 75 cases.

DISCUSSION

Dr. H. P. Cole, Mobile: Speaking of pellagraphobia, I have in mind a patient who came to one of the infirmaries here with a burn on the back of his neck, which was simply a dermatitis, but he came 150 miles to be treated for pellagra. Another patient in Tipton, Georgia, was treated for 2 months for pellegra, came to Mobile markedly anemic, insisted on transfusion for what he thought was pellagra, went home and died in three weeks from tuberculous peritonitis, and the case was listed as a death from pellagra.

Intubation in Laryngeal Diphtheria by the General Practitioner

Dr. Andrew M. Stovall, Jasper, reported eleven cases in which he resorted to intubation, with one death, and said a lesson should be learned from the case he lost by waiting for pronounced cyanosis to assert itself. He said: Do not temporize too long, but intubate as soon as signs of labored breathing are manifest. I would not advise the general practitioner, who is so situated as to command the aid of a specialist, to attempt this operation as a routine. But the physician of the rural districts, far removed from the specialist, should so equip and train himself as to be prepared to do this work when the urgent case presents itself.

SYMPOSIUM ON UNCINARIASIS

Dr. Herbert P. Cole and **Dr. Gilman J. Winthrop**, Mobile, presented a joint paper in which they reached the following conclusions:

1. Uncinariasis must be considered not merely a disease of the lower classes, but affects to a large extent all individuals living in the state.
2. The number of infected individuals showing practically no gross symptoms warrants the routine examination of the stools of all persons from infected districts.
3. Further study of the prevalence of hookworm disease among the better classes of people will aid in the final estimate of the extent of the disease in the south.

Dr. George Dock, New Orleans, spoke on the prevention and treatment of hookworm disease.

Dr. Charles W. Stiles, Washington, D. C., gave an address on uncinariasis illustrated by numerous stereopticon views.

Dr. Henry G. Perry, Greensboro, pointed out the importance of instituting an educational campaign against hookworm disease.

Dr. S. M. C. Howell, Midland City, discussed the etiology, pathology, symptomatology, and diagnosis of hookworm disease.

Cesarean Section

Dr. William D. Jaines, Lafayette, reported the case of a woman, aged 22, on whom he did a Cesarean section and delivered a living child at full term. Both mother and child were in perfect health. In connection with the operation he resected a portion of each tube to prevent future conception, but the patient told him a short time ago that she had been menstruating regularly for some time.

Indications for Removal of Faucial Tonsils and the Technic

Dr. Frank M. Thigpen, Montgomery, said that in his experience no evil effects have followed the removal of diseased tonsils, and that when the operation is done in a clean, careful and correct manner, the operator will be rewarded not only by the relief given the patient, but by the satisfactory results of his work.

Acute Endocarditis

Dr. William W. Harper, Selma: The treatment of ulcerative endocarditis is preventive. Since it is caused by gonorrhea and septic organisms, we should seek to cure these diseases as promptly as possible. The hope of the future lies in serotherapy. In all streptococcus infections, we should give antistreptococcus serum a thorough trial. Doctors should impress on the laity that gonorrhea is a serious disease and needs prompt and thorough treatment. In the acute stage small and increasing doses of the bacterins are giving good results in the hands of some.

Diagnosis of Obscure Cases of Appendicitis

Dr. Mack Rogers, Birmingham, drew the following deductions:

1. There is a normal involution of the appendix.
2. This is accompanied by a fibroid degeneration of the normal structures of the organ.
3. In this process the nerve fibers are the last to be eliminated and are, therefore, entrapped in the meshes of the contracting fibroid tissue and irritated.
4. This irritation manifests itself both by pain and reflex action upon other organs.
5. This pain calls out and maintains a permanent hyperleucocytosis that protects the appendix from infection.
6. This reflex action may manifest itself on almost any of the vital organs of the economy.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

A CONFERENCE OF OPHTHALMOLOGISTS WITH ORGANIZATION OFFICIALS ON FAMILY PHYSICIAN REFRACTING

By Leartus Connor, M.D.
DETROIT

The promotion of family physician refracting calls for the cooperation of all physicians. It is believed that if these understood its value, all would seek its possession. To promote this understanding the Detroit Ophthalmological Club invited to its meeting May 3, the leading officials of Michigan medical societies and educational institutions. The following guests were present, took part in the discussions and endorsed the resolutions adopted, viz.: Dr. J. H. Carstens, president Michigan State Medical Society; Dr. Winfred Haughey, secretary-editor Michigan State Medical Society; Dr. Frank B. Tibbals, chairman medicolegal committee, Michigan State Medical Society; Dr. Charles T. McClintock, member of committee on organization, Michigan State Medical Society; Dr. Guy L. Kiefer, health officer of Detroit; Dr. W. C. Martindale, superintendent Detroit public schools; Dr. Gerald Edmonds, Honor, Mich., and Dr. W. C. Garvin, Millington, Mich., family physicians doing simple refracting. The chairman of the council of the Michigan State Medical Society, Dr. W. T. Dodge, sent a letter supporting the movement. Though unable to be present, like support was given by the following: Dr. Victor C. Vaughan, dean medical department Michigan University; Dr. H. O. Walker, secretary Detroit Medical College; Dr. Arthur D. Holmes, president of the Wayne County (Detroit) Medical Society.

The chairman of the meeting, Dr. Leartus Connor, opened the discussion by a paper on "The Economic Value of Family Physician Refracting." He called attention to the fact that in the United States there are about 180,000,000 human eyes; 135,000 doctors; 3,000 ophthalmologists. This averages 60,000 eyes for each ophthalmologist. As every eye over forty years of age needs refracting, most of them several times, and as very many eyes under forty need refracting, we have an explanation of the fact that the ophthalmologists never have been able to meet the refractive needs of all the people in the United States. Because the family physicians never have been trained to supply these needs, salesmen of spectacles entered the field, and gave such satisfaction as to secure large and increasing support. Farther, without realizing the nature of their action, a large number of educated physicians support and patronize the opticians. In the hope of encouraging family physician refracting, the paper pointed out the vast values inherent in its universal adoption; values to ophthalmology and ophthalmologists, to general medicine and the family doctor; to the profession as a whole, in strengthening its organization, in solving the optician problem and in providing such cooperation of ophthalmologist with family doctor that the 180,000,000 of human eyes in the United States may be cared for by educated physicians, obviating the existing necessity for laymen ophthalmologists.

It was urged that if these values were accepted by this conference the members could use their positions to stimulate others to comprehend the facts and master family physician refracting till its enormous values be harvested for both pro- [illegible] nd people.

[illegible] efracting was shown to be an art quite within the [illegible] ery medical student, without neglecting any other [illegible] s, and of practice by any doctor, not already over- [illegible] work.

[illegible] ed out that while ophthalmology has many [illegible] sts) it has few soldiers (*family physicians*) [illegible] so is impotent against the invasion of opti- [illegible] orde of laymen. But an equipment of the [illegible] vith simple refracting would transfer all [illegible] halmologic army who, in turn, would [illegible] e opticians could reach them.

Every member of the club and its guests took part in the discussion. Some detailed the steps by which they had cast aside the dominant practice and adopted the one presented. Many virile reasons were adduced for the change, and suggestions made for promoting the new doctrine.

Though lasting several hours, the conference never lagged but grew in interest from start to finish. Each saw in a new light a solution of present difficulties, vast benefits to the nation and increased honor to the profession.

Without neglecting aught of present good work, members of the Detroit Ophthalmological Club and its guests of May 3, 1910, adopted as their watchword "Family Physician Refracting" until every physician in the United States is equipped therefor.

Finally the following resolutions, on motion of Dr. Don M. Campbell, professor of ophthalmology, Detroit Medical College, were unanimously adopted by the club:

WHEREAS, Family physician refracting promotes the cooperation of family physician and ophthalmologist; provides physicians adequate for the people's refractive needs; enriches ophthalmology and ophthalmologists, general medicine and family doctor, strengthens medical organization and solves the optician problem.

Resolved, That the Detroit Ophthalmological Club endorses the action of the Section on Ophthalmology of the American Medical Association in promoting "family physician refracting," the action of the Michigan State Medical Society in seeking to qualify its members to meet the people's refractive needs; the action of the Kentucky State Medical Society endorsing the Michigan idea of family physician refracting; the action of the medical colleges in substituting "family physician ophthalmology" for "specialist ophthalmology," and the action of the state registration boards in Michigan, Vermont, Nebraska and Utah in requiring a "working knowledge of simple refracting."

Resolved, That the Detroit Ophthalmic Club urge other state boards of registration to require (1) for license, "family physician refracting," and (2) for the right to practice ophthalmology "A Comprehensive Laboratory and Clinical Study" after securing a license.

Resolved, That the Detroit Ophthalmic Club encourage family physicians to qualify for intelligent cooperation with ophthalmologists by equipping themselves for simple refracting.

It is suggested that much profit would result from other ophthalmic societies arranging similar conferences with officials of general or county medical societies, or even with groups of family doctors. Indeed, individual ophthalmologists might confer with little bands of family doctors and encourage them to master simple refraction, with the assurance of helpful results.

Finally, family physicians doing simple refracting might so confer with neighbors and local societies, that all become more competent for the refractive needs of their families.

91 Lafayette Boulevard.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Third Weekly Meeting

EPILEPSY

ETIOLOGY: Heredity, organic and functional disorders in antecedents. Age, sex, preceding diseases, associated neuroses. Toxic agents, infections, syphilis, traumatism, reflex causes, mental strain.

PATHOLOGY: Varying changes found in different regions of brain, in neuralgia, in blood-vessels, in meninges.

SYMPTOM: Prodromes, character, time of onset. Auræ, motor, sensory, psychic, visceral, cerebral, etc. A. Complete convulsion, (a) tonic period, (b) clonic period, (c) period of stertor. *Modification* of each period. Status epilepticus. B. Incomplete attacks. Petit mal, vertiginous attacks, disturbance of consciousness, epilepsia procursiva, etc. C. Psychic equivalents of epileptic attack, automatism, etc. Post-paroxysmal conditions, tremors, paresis, loss of strength, diminished knee-jerks, petechiæ, headache, changes in urine, mental deterioration, etc.

DIAGNOSIS: Differentiate from hysteria, vertigos, toxic convulsions, organic brain lesions, transitory mania.

TREATMENT: Hygienic, dietetic. Physiological action of bromids, details of use in epilepsy. Use of other drugs. Patent medicines for "fits."

Medicolegal

Unlawful Practice of Medicine by a "D. S. T."

The Supreme Court of Indiana says, in Witty vs. State, 90 N. E. R. 627, that the party appealing, the defendant in the court below, who claimed to be a graduate of an institute of suggestive therapeutics, and in one of his advertisements appended the letters "D. S. T." to his name, was charged with practicing medicine without a license, in violation of the statute. The evidence established that he held himself out and advertised to the public by a sign in his office, and by publication in a local newspaper, that he was a "doctor," and capable and competent to successfully treat all forms of chronic diseases. He notified all persons, through the public press, that he was not only a "doctor," but that as such he was a specialist in the treatment of chronic diseases. He further advised them that he was capable of curing the many diseases mentioned in his advertisement without medicine or surgery, and that there were but few of the many diseases which did not yield to his drugless treatment.

The mere fact alone that in his practice he did not use drugs in any form whatever as a medicine to cure or heal the many diseases which he professed to successfully treat did not place him, in the eyes of the statute, within its meaning in the position of one not engaged in the practice of medicine. The term "doctor," as defined by the lexicographers, signifies or means, in one respect, a person who practices medicine. Consequently, when the defendant held himself out to the public, and advised them that he was a "doctor" located in the city; that he had certain office hours—he gave all persons to understand and be informed that he was at least engaged in the practice of healing or curing suffering humanity of diseases by some method or means adapted to that purpose, notwithstanding the fact he disclaimed the use of medicine of the character of drugs in his treatment of the diseases mentioned. He did not profess in his advertisement to be but a mere masseur engaged in giving massage treatment to all persons who might desire such, or who had been advised by their physician to take such treatment. He undertook to show by his advertisement that he was learned in his profession, and competent to diagnose diseases and prescribe the treatment necessary for a cure.

His counsel insisted that while it was true that he was shown to have had an office, that he advertised and held himself out as a doctor, "and was ready to and did administer to the wants of the sick, he did so exclusively by mental suggestion and by manual rubbing, and did not pretend to practice medicine in any shape or form." But the mere fact that he did not administer to his patients drugs in any form or manner, but confined his treatment to rubbing their afflicted parts, could not be held to exempt him from the provisions of the statute. If he, under the facts in this case, could be held as not coming within the provisions of the statute, then any person unlicensed to practice medicine might hold himself out to the public as a doctor, and treat all classes of diseases without administration of drugs, and not offend against the statute. Such a construction of the law would be inconsistent with its letter and spirit. The very object or purpose of the statute is to protect the sick and suffering and the public at large against the ignorant and unlearned by prohibiting them from holding themselves out to the world as doctors or physicians without having acquired any knowledge whatever of the human system, or the diseases and ailments with which it may be afflicted.

The defendant under the facts was properly convicted, and the judgment of conviction is therefore affirmed.

Operations from the Viewpoint of a Personal Injury Case

The Supreme Court of Iowa says, in White vs. Chicago & Northwestern Railway Co., 124 N. W. R. 309, that, of course, no one can be said to owe the duty of submitting to an operation, especially where the administration of an anesthetic is necessary in order that it be performed. No right is held more sacred, or is more carefully guarded by the common law, than is the right of every individual to the possession and control of his own person, free from all restraint or interference from others, unless by clear and unquestionable authority of law. As is well said by Judge Cooley: "The right to one's person may be said to be a right of complete immunity; to be let alone."

Whether an injured person shall submit to a further mutilation of his person is essentially a matter of personal choice. This is necessarily so, for experience has demonstrated that every operation is performed with some risk. But when pain may be obviated, and the condition of the injured member improved, by an operation without injury and at small expense and slight inconvenience, the person injured ought not to be recompensed on the theory that he will not avail himself of the benefits of modern surgery. Nor, on the other hand, is compensation to be limited to the reasonable cost of surgery as though the injured person were a chattel being put in state of repair. The feasibility of an operation calculated to obviate pain and improve conditions is to be considered by the jury, not owing to any duty of the injured party to submit his person to the surgeon's knife, but as bearing on the nature and extent of the injury and the probable consequences when accorded such treatment as ordinary prudence shall dictate.

It was requested that the jury be instructed in this case that if they found from the evidence that the injured man's fingers, at the place of amputation, still caused him pain, and that such pain could be obviated by a new amputation, at small expense, and without serious danger to him, then it would be his duty to have such new amputation, and he would in no event be entitled to recover for any pain or suffering that such new amputation would prevent. The instruction was refused, and it was not without fault, but the attention of the jury might well have been directed to the feasibility and probable effect of the operation as bearing on the amount of damages to be allowed.

Current Medical Literature

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

May 14

1 *Newer Conceptions of Myocardial Disease. T. E. Satterthwaite, New York.
2 The Crux of the Tuberculosis Problem. L. E. Flick, Philadelphia.
3 Phthisiophobia. J. H. Lowman, Cleveland, O.
4 Amebic Dysentery in New York. H. S. Patterson, New York.
5 Fatal Uncinariasis Infection. B. Lee and H. Brooks, New York.
6 What the Fight Against Tuberculosis has Accomplished. S. J. Maher, New Haven, Conn.

1. **Newer Conceptions of Myocardial Disease.**—To the classification of myocardial disease presented several years ago, Satterthwaite adds another form—atrophy of the heart, which is, however, very rare. His classification is as follows: (1) Acute parenchymatous myocarditis; (2) acute diffuse myocarditis, including the tuberculous, syphilitic and suppurative forms; (3) chronic myocarditis; (4) the fat heart; (5) the fatty heart; (6) hypertrophies, and (7) atrophies. Neither dilatation nor spasm is included in the table. Satterthwaite says that they are incidents which occur at times in any of the varieties mentioned, and cannot, therefore, be considered separately. He discusses the pathology and diagnosis of the various forms and their treatment.

Boston Medical and Surgical Journal

May 12

7 *Circulatory Failure in the Acute Infections of Children: Causes and Treatment. J. Howland, New York.
8 The Interpretation of Certain Cerebral Symptoms with Reference to v. Monakow's Theory of Diaschisis. E. W. Taylor, Boston.
9 Late Results Obtained by the Submucous Resection of the Nasal Septum. O. A. Lothrop, Boston.
10 *The Diagnostic Value of the Search for the *Spirochæta Pallida* in the Umbilical Cord of the New-Born Infant. A. B. Emmons, Baltimore.
11 Proctoclysis. P. W. Harrison, Boston.

7. Circulatory Failure in Acute Infections of Children.—Critical clinical observation and animal experimentation, says Howland, are in accord in referring the cause of circulatory disturbance in acute infections to a failure and final collapse of the vasomotor center. There is also almost complete agreement obtained by animal experiments and by modern methods of determining the human circulatory capacity as to the drugs and methods most useful in this circulatory disturbance. He says that from the knowledge at present available it seems that the continuous use of cold air, the use of caffein and camphor reinforced by digitalis, with infusions of salt solution and the careful administration, not too often repeated, of adrenalin, are our best methods to combat this dangerous condition.

10. Spirochæta Pallida in Umbilical Cord of the New-Born Infant.—Emmons studied the cords in 30 cases suggestive of syphilis. When the child was born alive, the portion of the cord immediately adjoining the ligature was studied, and in stillbirth cases the portion between the ligature and the abdomen. Whenever possible, autopsy was done, and in each case the routine microscopic examination of the placenta gave a clue as to the probable diagnosis. The tissue was imbedded in paraffin and the sections stained by the method of Levaditi. Whenever the livers from the corresponding children were obtainable, they were imbedded at the same time, so that sections could be compared with those of the cord. When positive results were obtained, the liver sections showed the abundant presence of a well-stained spirochete, and in such cases numerous sections of cord were studied and a negative report registered only after a most prolonged and careful search.

From this study, Emmons draws the following conclusions:

1. *Spirochæta pallida* is rarely found in the cords of the syphilitic new-born infants. When positive results are obtained, they are present in considerable abundance in the muscularis of the umbilical vein in sections taken from the neighborhood of the umbilicus.

2. A large proportion of syphilitic new-born infants, as shown by microscopic examination of the placenta, as well as by characteristic autopsy findings with spirochetes demonstrable in the liver, show that spirochetes could not be found in the cord even after extensive search. Accordingly a negative diagnosis cannot be made by this procedure alone.

3. Occasionally the search for spirochetes in the cord may be of positive value as a clinical test. But the much greater frequency of negative findings hardly justifies its adoption as a routine procedure.

New York Medical Journal

May 14

12 Provision for Drunkards and Inebriates in New York. F. Peterson, New York.
13 The Contractile Elements in the Connective Tissue. J. Wright, New York.
14 The Nursing Problem. T. Potter, Indianapolis.
15 The Diet in Pulmonary Tuberculosis. C. Rayevsky, Liberty, N. Y.
16 Problems in the Non-Institutional Treatment of Pulmonary [illegible] T. Howard, Brooklyn.
17 [illegible]: Ten Family Epidemics and Forty-[illegible] F. C. Knowles, Philadelphia.
18 The Caloric Method of Infant Feeding. S. A. Blauner, New York.
19 Acute Anterior Poliomyelitis. J. W. Cokenower, Des Moines, Iowa.
20 Serodiagnosis of Syphilis (continued). V. C. Pedersen, New York.

Lancet Clinic, Cincinnati

April 30

21 Intracranial Neoplasms: Diagnosis and Indications for Treatment. T. A. Williams, Washington, D. C.
22 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
23 Operative Treatment of Tuberculous Joints. H. J. Whitacre, Cincinnati.
24 Medical College Management. J. K. Scudder, Cincinnati.

American Journal of Medical Sciences, Philadelphia

May

25 Vaccine Therapy in Colon-Bacillus Infection of the Urinary Tract. F. Billings, Chicago.
26 *Paroxysmal Arteriospasm with Hypertension in the Gastric Crises of Tabes. L. F. Barker, Baltimore.
27 *Five Hundred and Fifty Cases of Typhoid in Children. S. S. Adams, Washington, D. C.
28 Arterial Hypertension. A. R. Elliott, Chicago.
29 Use and Abuse of Gastroenterostomy. J. B. Deaver, Philadelphia.
30 Have we Made any Progress in the Treatment of Gonorrhea? L. B. Bangs, New York.
31 *Helminthiasis in Children. O. M. Schloss, New York.
32 An Epidemic of Noma. H. Neuhoff, New York.
33 The Antitryptic Activity of Human Blood Serum: Its Significance and its Diagnostic Value. R. Weil, New York.
34 *The Wasserman and Noguchi Complement-Fixation Tests in Leprosy. H. F. Fox, New York.
35 *The Effect of Tuberculosis on Intrathoracic Relations. A. P. Francine, Philadelphia.

26. Gastric Crises of Tabes.—A woman, aged 49, complained of severe pains in the back and stomach, and also of headache. Except for vague "rheumatic" pains for some 10 years she suffered from no disease until the present trouble began. About eight years ago she began to have attacks of pain in the back, indigestion and pains in the joints, especially in the shoulders and knees. The pain in the small of the back was tolerably severe, and was sometimes associated with nausea. She has suffered much from headache, frontal and occipital, and she thinks that her eyesight has failed during the last few years. The individual attacks begin with a feeling of a lump in the throat which cannot be swallowed (globus?). Vomiting soon comes on, so that nothing can be retained in the stomach, and she has extreme pain in the back and abdomen and complains of sensitiveness of the skin of the trunk. The pain is so severe that she usually weeps violently and tosses about in bed, grinding her teeth. She has never lost consciousness in an attack, nor has there been any disturbance of the sphincters. Her mind seems clear during the attacks. Since about a year ago there have been nearly two attacks a week, each lasting from a few hours to three days. She has noticed palpitation of the heart during some of the attacks. In the crises from which this woman suffered the pain was situated in the upper abdomen and radiated into the back. The pain was accompanied by paroxysmal arteriospasm, with great elevation of the maximal arterial pressure. That the hypertension depended on the arteriospasm was evident from the effect of amyl nitrite, which reduced the maximal pressure promptly to 90 mm. Hg., though as soon as the effects of the nitrite had worn off the hypertension reappeared.

27. Typhoid in Children.—There were 65 deaths, a mortality rate of 11.8 per cent. in this series reported by Adams. Taking the periods separately, we see the greatest reduction in the last decade and a half, which he thinks is unquestionably due to the methods of treatment employed. From 1892, the beginning of the third decade, to 1898, inclusive, the treatment followed was hydrotherapy, antiseptic and antiperiodic. During this time 88 patients were treated; 10 died, a mortality of 11.36 per cent. At the beginning of 1899 the purely hydrotherapeutic treatment was begun and has been strictly followed throughout the remainder of the decade, with the result that of the 164 patients then treated, 18 died, a death rate of 10.97 per cent. Four patients of the last series died of pulmonary tuberculosis either during or directly following a typical course of typhoid. Excluding them from the mortality list, the death rate will be 8.54 per cent.

Some slight changes in treatment have been instituted during the last half decade. The diet was augmented in nutritive value by the addition of cereals, eggs and bread to the prescribed routine of milk and broths. The patient's ability to digest such "soft food" was carefully watched and only two or three instances were recorded in which the semisolid food had to be discontinued. By adopting this method, Adams says that most of the heart-rending scenes of the sick-room will be avoided. The otherwise patient child no longer begs and cries for "something to eat;" there is no longer progressive emaciation until the little skeleton is covered by loose skin hanging in folds; relapses become less frequent; convalescence is shortened, and complete recovery replaces prolonged invalidism.

31. Helminthiasis in Children.—Twelve of 30 children who suffered from unexplained nervous or gastrointestinal symptoms were found by Schloss to harbor intestinal worms. Consecutive examinations of 280 children showed that 80 (28.57 per cent.) harbored intestinal worms; 5 of the children harbored 2 species of parasite, giving a total of 85 infections. Thirty-one (11.07 per cent.) of the children harbored *Trichuris trichiura*, 23 (8.21 per cent. harbored *Oxyuris vermicularis*, 20 (7.14 per cent.) harbored *Hymenolepis nana*, 6 (2.14 per cent.) were infected with *Ascaris lumbricoides*, and 5 (1.78 per cent.) with *Tænia saginata*. Only 1 of 33 children infected with *Trichuris trichiura* (from both groups of examinations) suffered from symptoms. Thirty-five of the 51 children infected with the other parasites (from the consecutive examinations) suffered from symptoms. The eosinophil blood cells were not increased in cases infected with *Trichuris trichiura*.

34. Wassermann and Noguchi Fixation Tests.—It is claimed by Fox that a positive Wassermann reaction is frequently obtained in cases of leprosy giving no history or symptoms whatever of syphilis. The reaction is at times very strong, inhibition of hemolysis being complete. It occurs chiefly in the tuberculous and mixed forms of the disease, especially in advanced and active cases. In the cases of the maculoanesthetic and purely trophic type the reaction is generally negative.

35. **Effect of Tuberculosis on Intrathoracic Relations.**—Francine's report deals with the changes brought about in intrathoracic relations as shown by skiagrams of 60 patients with pulmonary tuberculosis, studied clinically before and after the taking of the skiagrams. Frequently in advanced pulmonary tuberculosis the aorta is displaced as well as the heart and in the same direction, usually to the right. In the present series, many of which were advanced or far advanced cases, the heart in the majority of instances was not displaced. Absence of displacement is much more common, in fact, almost the rule, in acute infiltrations and consolidations, before fibrosis and contraction have taken place. In many instances, even when the lesions were widespread and often destructive, the heart was not displaced. When the pulmonary lesions are of fairly symmetrical character on both sides, the heart is more commonly displaced to the right than to the left. In these cases there is usually evidence to show that the primary and older lesion is on the right. When the lesion is more extensive on the left the heart is not so regularly displaced nor to the same extent, as in corresponding right-sided lesions. Rarely the fibrosis of the lungs and pleura may be so great or of sufficient density to obliterate the boundaries of the heart. In many cases the skiagrams show an interesting feature which is not demonstrable clinically, namely, that during systole of the heart there is an area between the lower boundary of the heart and the diaphragm of about the extent of one centimeter, which distinctly transmits the *x*-rays. The limits or extent of the cardiac excursion may also be seen in many cases. In four cases, distinct pericardial adhesions could be seen.

The heart appeared normal in size, both in the skiagrams and to physical examination in all the cases, with four exceptions. In three of these the enlargement was practically confined to the right side, and the lungs were markedly emphysematous. In one case there was a general hypertrophy. There was no evidence of an organic valvular lesion in the series, though in some cases soft systolic murmurs were audible in the mitral and pulmonary areas. The skiagrams were taken under full inspiration. In 29 cases (48.33 per cent.) the diaphragm was unaffected by the pulmonary lesion. The diaphragm was affected in this series in 51.66 per cent. of the cases. In every case in which the heart was displaced the diaphragm was elevated on the side toward the displacement, and in the cases in which the heart assumed the anteroposterior position the diaphragm was elevated on both sides. The diaphragm was affected in 9 cases in which the position of the heart was normal.

In every case in this series the cervical glands were enlarged to palpation. In 51.66 per cent. of the cases enlarged glands could be seen in the plates. With the exception of about 6 cases all those in which enlarged glands were visible, were either early or moderately advanced, without the breaking down of tissue; while in the majority of the advanced cases the glands did not show. It would appear as if there were two explanations for the absence of glands in the majority of plates in which they were not visible, namely, that their presence was concealed by the area of involvement, or what appears more likely that with the advance of the disease the glands had softened or broken down and so failed to give rise to a shadow. There were usually only 3 or 4 glands noted in any one plate, and in a number of instances they appeared to be calcified.

The presence of calcareous infiltration in the costal cartilages was noted in only 8 cases. It was usually confined to the costal cartilage of the first rib, though in one instance it involved all the cartilages. In the majority of advanced cases the involvement was of sufficient density and extent to have concealed the presence of calcification in the cartilages of the first rib, but there was no evidence of calcification in the costal cartilages which could be properly studied.

Medical Herald, St. Joseph

April

36 The Physical Basis of Mental Disease. F. P. Norbury, Hospital, Ill.
37 Cataract. F. B. Tiffany, Kansas City, Mo.
38 Scarlatiniform Erythema. W. Frick, Kansas City.
39 Tumors of the Female Breast. F. H. Clark, El Reno, Okla.
40 Conservation of the Mucous Membrane in Intranasal Surgery. T. C. Todd, Oklahoma City, Okla.

Maryland Medical Journal, Baltimore

May

41 *An Unusual Surgical Case under Local Anesthesia. G. Steele, Cambridge, Md.
42 The Advancement of Medical Education. G. M. Linthicum, Baltimore.
43 Historical Sketch of Dr. Elisha Perkins, Inventor of the Metallic Tractor. J. T. Smith, Baltimore.
44 The Newer Methods of Treating Fractures. A. McGlannan.
45 Hahnemann. H. M. Cohen, Baltimore.

41. **Unusual Surgical Case Under Local Anesthesia.**—Steele records a case of irreducible, congenital, left inguinal hernia in a child 20 months old, with undescended testicle and appendix in the hernial sac, complicated with double bronchopneumonia. Operation for radical cure of hernia, and removal of appendix was done through left inguinal ring under local anesthesia, with recovery of the patient.

Archives of Pediatrics, New York

April

46 Pneumothorax: A Clinical and Radiographic Study. F. Hueber and I. S. Hirsch, New York.
47 Meningitis and Conditions Simulating Meningitis. F. S. Meara, New York.
48 Influenza Meningitis. L. C. Ager and O. T. Avery, Brooklyn.
49 Pulmonary Abscess Following Septic Deglutition Pneumonia. S. Seilikovitch, Philadelphia.
50 Cerebrospinal Syphilis. K. Schlivek, New York.

American Medicine, New York

April

51 *History and Occurrence of Pneumonia: Brief Statistical Data. H. E. Lewis, New York.
52 Differential Diagnosis of Lobar Pneumonia. H. Stern, New York.
53 Symptomatolog [illegible] Prognosis of Pneumonia in Children. [illegible] York.
54 *Pneumonia in [illegible] Brooklyn.
55 Pneumonia as [illegible] C. E. Woodruff, U. S. Army.
56 Treatment of Pneumonia. B. Robinson, New York.
57 Treatment of Pneumonia. G. F. Butler, Chicago.
58 *Use of Vaccines in Treatment of Pneumonia. F. E. Stewart, Philadelphia.
59 Diet in Pneumonia. W. H. Porter, New York.
60 Pneumonia as a Postoperative Complication. R. T. Norris, New York.
61 Pneumonia in the Aged. R. W. Wilcox, New York.
62 Meningitis Complicating Pneumonia. A. Hymanson, New York.

51. **History and Occurrence of Pneumonia.**—All available statistics, says Lewis, point to the fact that pneumonia is increasing. Especially does this seem to be so in certain localities, as, for instance, in Chicago. During the last 40 years the mortality from pneumonia has increased from 4.4 to 19.95 per 10,000 inhabitants. The last U. S. Census shows that pneumonia, next to tuberculosis is responsible for a larger number of deaths each year than any other disease. Of 12,098 cases, 8,881, or 73.41 per cent., occurred in males, and 3,217, or 26.59 per cent., in females. Among 10,159 cases, the disease terminated by crises in 5,397, or 53.1 per cent.; in 1,042 cases, 21.7 per cent., the crises occurred on the seventh day; in 625 cases from the tenth to the seventeenth day.

Among 2,613 cases death occurred as follows: Before the fourth day, 161 cases; fourth to twelfth day, 1,483; twelfth to eighteenth day, 403 cases. The greatest number of deaths occurred on the seventh day, 230.

54. **Pneumonia in Children.**—The one drug recommended by Kerr in bronchopneumonia is belladonna, but to be effective, he says, it must be given in doses large enough to cause flushing of the face; it may be continued for the first few days. Small doses are of no value and its protracted use is not indicated. There must be secured for the child (1) the best hygienic surroundings possible; (2) a diet reduced but of such quality as properly to support the system; (3) free administration of water; (4) regularity of the bowel function; (5) abundance of fresh cool air day and night; (6) strict cleanliness of the body, and particularly the nose and mouth; (7) as perfect physical and mental quietude as possible. The cautious use of the internal emetics is sometimes attended with benefit, and while an initial vomiting may prove beneficial in clearing away the bronchial mucus, this method must not be persisted

in. Counterirritation with mustard paste is valuable, and it is not wise to wait until pulmonary collapse is suspected, for used early it gives relief from the dyspnea and cough. Everything that weakens should be avoided; everything that strengthens encouraged. Stimulation is not alone wise, but absolutely necessary after the first few days. Delay until the necessity is present means much lost ground, for everyone of these patients needs stimulation practically throughout. Kerr's preference is for a combination of small doses of camphor and whisky; the camphor being given in sweet almond oil (¼ grain to 5 drops) and the whisky well diluted with water. Tonics should be given just as early as possible, for delay in this matter, as in the case of stimulants, may mean lost ground.

58. **Vaccines in Pneumonia.**—Stewart holds that the pathologic conditions resulting from an acute pneumococcic infection can be relieved, removed or modified, by injecting subcutaneously killed bacteria of the species causing the diseased condition.

Annals of Ophthalmology, St. Louis

April

63 Classification of Eye Diseases. A. Duane, New York.
64 Gonorrheal Iritis Successfully Treated by Gonococcus Vaccines. E. A. Shumway, Philadelphia.
65 Successful Extraction of Senile Cataract from the Eyes of Lepers. T. J. Dimitry, New Orleans.
66 Vitiligo Iridis—Report of Two Cases. A. C. Sautter, Philadelphia.
67 Complete Albinism: Changes in the Diameters of the Lens as Seen Through the Iris. G. F. Libby, Denver.
68 Retinal Phlebitis Following Influenza. E. S. Thomson, New York.
69 Perfect Optical Work. W. M. Richards, New York.
70 Treatment of the Lacrimal Sac. W. McE. Brown, Neustadt, Ontario, Canada.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

April

71 Modern Views on Irregular Heart Beat. H. Sewall, Denver.
72 *Substernal Respiratory Squeal: A Hitherto Undescribed Adventitious Chest Sound Heard over the Region of the Heart. R. G. Curtin, Philadelphia.
73 The Pension Claimant and Visual Impairment. S. D. Risley, Philadelphia.
74 Diet and Climate. W. M. Gibson, Utica.
75 The Significance of Sense Deception as a Symptom of Insanity. W. W. Hawke, Philadelphia.

72. **Substernal Respiratory Squeal.**—The sound described by Curtin was discovered accidentally. It is the "*bruit du diable,*" or venous hum of the veins of the neck in extreme anemia, which hum it seems to resemble more than any other sound. It resembles to some extent the hissing squeal or singing of a boiling tea-kettle. It is more like a shrill musical whistling than a humming sound. It is remittent when strong, is loudest on inspiration, and becomes faint or is lost on expiration.

The continuousness of this sound, says Curtin, shows that it is not produced at the aortic, pulmonary or tricuspid orifice; otherwise it would cease when the blood current is stopped by the shutting of the valves at these orifices. The only places in the heart at which there could be a continuous sound, such as the one described, would be in the blood flowing into the right or left auricle, and these two places in the heart are the only ones where the respiration has a perceptible modifying influence on the flow of blood; but, again, the shutting of the mitral and tricuspid valves has a modifying influence on the current, which would be perceptible in an abnormal sound connected with it.

The point of greatest intensity of the sound is a little to the left of the median line of the sternum at or just below the second cartilage. Curtin therefore locates the sound at or near the upper part of the left auricle where the pulmonary veins empty into it. The sound is louder, stronger and coarser (indicating a larger vessel and a more active flow of the blood) than the sound heard at the base of the neck, when the jugular is pressed with the stethoscope; but it is of the same general character. Its location under the sternum places it beyond the reach of any pressure. It is not influenced by the action of the heart; that is, one cannot find any change in the sound with the systole or diastole. During inspiration there is a marked change. Just at the commencement of inspiration the sound becomes gradually louder and more pronounced until the beginning of expiration, when it begins to diminish. In some cases it was not audible after the commencement of the act of expiration.

Annals of Otology, Rhinology and Laryngology, St. Louis

March

76 Nasal Tuberculosis Involving the Right Ethmoid Bone, with Recovery After Operation. O. T. Freer, Chicago.
77 Extension and Flexion in Direct Laryngoscopy. R. H. Johnston, Baltimore.
78 Hemophilia with Remarks on Hemorrhagic Diathesis. T. Hubbard, Toledo.
79 Casts of the Infantile Pharynx: Special Reference to the Eustachian Tube. W. C. Braislin, Brooklyn.
80 The Larynx of Mycetes Seniculus (Howling Monkey). J. Holinger, Chicago.
81 Zoology of Mycetes Seniculus. F. C. Baker, Chicago.
82 The Various Inflammations of the Ethmoid Bone as Advanced by Uffenorde in His Work *"Die Erkrankungen des Siebbeines."* R. H. Skillern, Philadelphia.
83 Eustachian Obstruction. W. C. Braislin, Brooklyn.
84 Partial Bibliography of Recent Papers Relating to the Eustachian Tube. W. C. Braislin, Brooklyn.
85 Why the Failures After Radical Mastoid? J. F. Barnhill, Indianapolis.
86 Intranasal Measurements Which Indicate that Palatal Expansion Increases the Width of the Nasal Fossæ. E. E. Foster, New Bedford.
87 Sinus Thrombosis of Otitic Origin and Its Relation to Streptococcemia. E. Gruening, New York.
88 Recurrent Mastoiditis with Involvement of the Labyrinth. H. B. Blackwell, New York.
89 Sinus Thrombosis, Cellulitis of the Foot and Acute Inflammation of the Thyroid Cartilage. T. L. Saunders, New York.
90 The After-Treatment of Accessory Nasal Cavities Operated On. H. Horn, San Francisco.
91 Latest Advances in the Study of Tinnitus Aurium. D. B. Delavan, New York.

Interstate Medical Journal, St. Louis

May

92 Prognosis in Operations for Appendicitis. M. Savariaud, Paris, France.
93 Cardinal Principles for Successful Feeding of Infants. T. M. Rotch, Boston.
94 *Direct Transfusion of Blood—Its Indications. L. H. Hempelmann, St. Louis.
95 Therapeutic Value of the Carlsbad Cure, Especially in Diseases of the Digestive Tract. L. V. Aldor, Berlin, Germany.
96 A Probable Cause for Extrauterine Pregnancy. F. A. Glasgow, St. Louis.
97 *Standardization of Disinfectants. R. B. H. Gradwohl, St. Louis.
98 Dysmenorrhea of Uterine Origin. S. J. McMamara, Brooklyn.

94. **Transfusion of Blood.**—Direct transfusion, according to Hempelmann, is indicated in postoperative hemorrhage, hemorrhage of typhoid, gastric ulcer, purpura, hemophilia, hemorrhagic disease of the new-born infant, illuminating gas poisoning, and possibly in pernicious anemia. It has been found useless in cancer, Hodgkins' disease, uremia, leukemia and in infectious diseases.

97. **Standardization of Disinfectants.**—Gradwohl endorses the Rideal-Walker method of standardizing disinfectants which is now used and insisted on in Great Britain and throughout Europe as an official standard, bearing the endorsement of the Admiralty, War Office and Local Government Boards of Great Britain. He urges that local, state and government boards in the United States should adopt it and require all manufacturers of disinfectant solutions to label their products clearly to show the carbolic-acid coefficient. If manufacturers are honest in their claims, they should be willing and eager to have official bacteriologic checking of their products with the Rideal-Walker technic. Physicians and laymen should likewise insist on manufacturers showing the carbolic-acid coefficient of their respective products when they desire patronage. In this way the honest manufacturer may make his dishonest competitor come out into the light and be exposed. Only those who are making false claims will oppose this procedure. It is fair to the maker, to the consumer and to the bacteriologists.

Quarterly Bulletin of Northwestern University, Chicago

March

99 Pain in the Ear and Its Diagnostic Significance. J. G. Wilson, Chicago.
100 Gram Stains of Feces in Pellagra. W. H. Buhlig, Chicago.
101 Leucocytosis of the Lymphocyte Type. W. H. Buhlig, Chicago.
102 [illegible] T. J. Watkins, Chicago.
103 [illegible] Knee-Joint. E. W. Andrews, Chicago.
104 [illegible] Cervical Ribs. S. C. Plummer, Chicago.
105 Cervical Ribs. Six Cases from the Clinic of Dr. W. E. Morgan. C. F. Sawyer, Chicago.
106 Retroflexion and Retroversion of the Gravid Incarcerated Uterus. H. M. Stowe, Chicago.
107 Ga[illegible] with Metastases in the Cervical Glands [illegible] Glandular Tuberculosis. W. H. Buhlig and W. L. [illegible], Chicago.

American Journal of Surgery, New York

May

108 *An Improved Method of Preparing Catgut Ligatures. E. McDonald, New York.
109 Methods of Posterior Urethroscopy: Description of a New [illegible] L. Buerger, New York.
110 [illegible] E. A. Ayers, Branchville, N. J.

111 Scotland [illegible] al and Surgical Development. R. G. [illegible]
112 Chronic [illegible] of the Middle Ear. L. A. McClelland, Brooklyn.
113 Extirpation of the Rectum for Adenocarcinoma by the Kocher Method. E. Staehlin, Newark, N. J.
114 Lymphangioma: A Case of Macroglossia and One of Macrocheilia. A. A. Kerr, Salt Lake City.

108. **Improved Method of Preparing Catgut Ligatures.**—McDonald has adopted the following method of preparing catgut: (1) Iodin 4 per cent. in acetone, 8 days; (2) wash in acetone, 4 days; (3) preserving solution, acetone, 85 per cent.; Columbian spirits, 10 per cent.; glycerin, 5 per cent. The glycerin should first be dissolved in the alcohol and then added to the acetone, as *acetone itself is not a solvent of* glycerin. This method is said to possess the following advantages: The solutions are fat solvents and antiseptics; the iodin is used in greater strength than in Claudius' method and it impregnates the gut so that the ligatures are black and well saturated with iodin when they are placed in the clear acetone solution. The pure acetone abstracts the excess of iodin from the gut, leaving the gut clear and white. The preserving solution of acetone, alcohol and glycerin completes the bleaching, and at the same time softens the gut, which is not much softened by the pure acetone. The latter, however, does not harden the gut, but abstracts the water from it and leaves it of the same flexibility as gut that has been preserved in chloroform, as in the well-known commercial process. The addition of the glycerin and alcohol to the acetone in the preserving solution is sufficient in amount to soften the catgut; at the same time the dehydrating power of the acetone prevents the gut from swelling up, as it does when it is placed in alcohol solution. Acetone itself, he states, is also a very strong antiseptic.

Bulletin American Academy of Medicine, Easton, Pa.

April

115 Report of the Delegate to the Conference of the Council of Medical Education of the American Medical Association. H. B. Hemenway, Evanston, Ill.
116 Report of the Delegate to the Annual Meeting of the Association of American Medical Colleges. C. McIntire, Easton, Pa.
117 Influence of Diet on Infant Mortality. J. P. C. Griffith, Philadelphia.
118 Relation of Syphilis to Infant Mortality. R. A. Urquhart, Baltimore.
119 Curative Powers in Human Milk. J. M. Taylor, Philadelphia.
120 Excessive Child-Bearing as a Factor in Infant Mortality. A. Hamilton, Chicago.
121 Infant Morbidity and Mortality with Special Reference to French Methods. C. R. Henderson, Chicago.

New York State Journal of Medicine, New York

April

122 *Elements of Prognosis in Chronic Valvular Diseases of the Heart. R. Abrahams, New York.
123 *Dilatation of the Heart. W. T. Mulligan, Rochester.
124 Significance and Value of the Cammidge Test in Pancreatic Diseases. S. R. Blatteis, New York.
125 Need of Special Schools for Crippled Children. P. Le Breton, Buffalo.
126 Pa [illegible] umors. F. R. Ford, Utica.
127 Cl [illegible] emperature in Pulmonary [illegible]
128 Di [illegible] S. Wile, New York.
129 Significance of Amblyopia. G. M. Gould, Ithaca.

122, 123. Abstracted in THE JOURNAL, Feb. 19, 1910, p. 643.

Journal of Medical Research, Boston

April

130 Hypersusceptibility of Anaphylaxis. E. R. Baldwin, Saranac Lake, N. Y.
131 Passive or Transferred Anaphylaxis. A. K. Krause, Saranac Lake, N. Y.
132 The Acquired General Sensitiveness of Normal Guinea-Pigs to Tubercle Protein as a Result of Preliminary Intradermic Injections. A. K. Krause, Saranac Lake, N. Y.
133 *Effect of the Administration of Preparations of Tuberculous Lymph Glands on Experimental Tuberculosis. E. L. Trudeau and A. K. Krause, Saranac Lake, N. Y.
134 Differences in Precipitins Produced by Tubercle Bacilli. E. R. Baldwin, Saranac Lake, N. Y.
135 The Question of Cattle Immunization and the Transformation of the Human Bovine Type of Tubercle Bacillus. E. R. Baldwin, Saranac Lake, N. Y.
136 Use of Antiformin for Detection of Tubercle Bacilli in Sputum, etc. R. C. Paterson, Quebec, Canada.
137 Pathologic Cytology of Surgical Shock. D. H. Dolley, Chapel Hill, N. C.
138 Cytology and Life History of Trypanosomes. E. N. Tobey, Boston.
139 Further Transfusion Experiments. S. P. Beebe, New York.

133. **Action of Preparations of Tuberculous Lymph Glands on Experimental Tuberculosis.**—The experiments conducted by Trudeau and Krause fall into four series; two with homologous gland extracts, and two with extracts of human lymph glands. They found that guinea-pigs treated with material from homologous tuberculous glands are not immunized against the development or spread of experimental tuberculous injection. The gland material in this series probably contained tubercle bacilli. Guinea-pigs treated with filtered extract of homologous tuberculous glands do not resist experimental tuberculosis. This extract was used in a comparatively fresh condition. The experiment was not regarded as a fair test because of the high dilution of the extract and the small number of doses that the animals receive. Guinea-pigs treated with filtered extract of tuberculous human glands showed an apparent resistance to the spread of tuberculous infection. This resistance was probably only apparent. The extract was from glands in various stages of the disease—hyperplastic and necrotic. Treatment was fairly thorough, and the use of the extract was begun immediately after preparation and continued for 6 weeks. Guinea-pigs treated more thoroughly with filtered extract of tuberculous human glands acquired no immunity against infection from tuberculosis or its development. The extract was from glands that showed various grades of disease, from early to advanced. It was concentrated and its use was begun three months after its preparation.

Old Dominion Journal Medicine and Surgery, Richmond

April

140 Hypernephromata. L. B. Wilson, Rochester, Minn.
141 What May Be Learned of Cardiac Disease from Multiple Tracings. W. N. Berkeley, New York City.
142 Acid Intoxications and Their Therapeutic Indication. D. Vanderhoof, Richmond.
143 Nephritis Regarded as a Disorder of Metabolism. E. B. Claybrook, Cumberland.
144 Diphtheria. C. S. Webb, Bowling Green, Va.

Bulletin Medical Chirurgical Faculty of Maryland, Baltimore

May

145 *The Importance of a Thorough Teaching of Infectious Diseases in the Medical Curriculum. C. F. von Pirquet, Baltimore.

145. Abstracted in THE JOURNAL, May 21, 1910, p. 1719.

Journal Indiana State Medical Association, Fort Wayne

April

146 Vaccination Prophylaxis in Typhoid. M. M. Eckelman, Elkhart.
147 Four of the More Common Diseases of the Eye and Their Management. C. M. Howard, Warsaw.
148 Degenerate Tonsils: Causative Factors in Producing Nose, Throat and Constitutional Affections. D. W. Layman, Indianapolis.
149 Sketches of the Medical History of Indiana. G. W. H. Kemper, Muncie.
150 Case of Lead Poisoning. E. M. Hoover, Elkhart.
151 Melena Neonatorum. G. B. Lake, Wolcottville.

Albany Medical Annals

May

152 A Critical Analysis of a Series of 180 Cases of Acute Intraperitoneal Infections. E. MacD. Stanton, Schenectady, N. Y.
153 Rational Treatment of So-Called Inoperative Uterine Tumor. W. B. Chase, Brooklyn.
154 Definitions of "Contagious" and "Infectious." G. E. Gorham, Albany, N. Y.
155 *Hemolysis *in Vitro* and *in Vivo* as a Means of Diagnosis of Carcinoma. A. Krida, Schenectady, N. Y.

155. **Hemolysis in Diagnosis of Carcinoma.**—Of a total of 1,812 observations reported by 10 different workers, 472 cases were carcinoma, and of these 317, or 67 per cent., gave positive hemolytic reactions; 79 were benign tumors, of which 1 or 1.25 per cent. were positive; 507 observations were made in a variety of diseases, 74, or 15 per cent., of which presented positive reaction; 509 observations were made on normal individuals; 14, or 2.6 per cent., were positive. In 40 postoperative carcinoma cases without clinical recurrence. the reaction was uniformly negative. One hundred and eighty-eight tests were performed on tuberculous patients; of these, 82, or 44 per cent., presented Crile's "reverse" hemolysis. Krida has made 76 tests. In 12 cases of carcinoma, the reaction was positive in 9, or 75 per cent. In 4 cases of carcinoma without clinical recurrence the reaction was uniformly negative. In 23 cases of a variety of diseases, 1, or 4 per cent. (chronic ulcers), presented a positive reaction. Of 25 clinically well patients, 2, or 8 per cent., responded positively to the reaction. In a certain small number of cases not clinically carcinomatous, a positive

reaction was obtained. There were in all 5 such cases, in all of which Krida applied a second test 2 or 3 days after the first. The second test was positive in 3 of the cases; one of these was a case of chronic ulcers; 2 individuals were normal. In the remaining 2 patients, clinically well, the test proved negative. The hemolytic reaction occurs in so great a percentage of carcinoma cases and in so small a percentage of normal individuals and patients with other diseases, which conditions can usually be differentiated, as to make it of material diagnostic assistance in doubtful cases, especially in doubtful cases of carcinoma of the gastro-intestinal tract. Especially as it is so simple of application, Krida holds that it should be performed in all suspected carcinoma cases. The "*in vivo*" or "skin" reaction, because of its better scientific basis, and because it is technically less difficult and time-consuming, Krida regards as the clinical method of choice.

Southern Medical Journal, Nashville

April

156 Philosophy, Therapeutic Value and Present Status of Mental Suggestion. J. D. Quackenbos, New York.
157 Treatment of Simple Fractures. D. Eve, Nashville.
158 The Great Black Plague. R. W. Weaver, Nashville, Tenn.
159 Examination of Infant Stools with Special Reference to So-Called Casein Masses. R. G. Owen, Iowa City.

American Journal of Physiology, Boston

May

160 A Quantitative Study of Faradic Stimulation: IV. The Make and Break Key. E. G. Martin, Boston.
161 *Effects of Distilled Water and of Various Solutions on the Weight and Length of Striated Muscle. E. B. Meigs, Boston.
162 Modifications of the Method in Use for Determining the Quantity of Mono-Amino Acids Yielded by Proteins when Hydrolyzed with Acids. T. B. Osborne and D. B. Jones, New Haven, Conn.
163 Exchange of Air in the Eustachian or Guttural Pouches of the Horse. P. A. Fish, Ithaca, N. Y.

161. **Effects of Distilled Water and of Various Solutions on Muscles.**—Meigs' investigation shows that the sarcostyles of the striated muscles of frogs are so constructed that any increase in their volume brings about, as a necessary mechanical result, a decrease in their length. All forms of muscle rigor are due to the swelling produced by an accumulation of acid within the muscle. The removal of rigor with salt solution, and particularly by salt solutions which contain small quantities of sodium bicarbonate, is explained by the removal of the acid reaction of the muscle. The conclusion of McDougall seems to be correct, that the contraction of striated muscle is the result of the swelling of the sarcostyle, which in its turn is brought about by the examination within them of the minute quantities of lactic acid.

Journal of Arkansas Medical Society, Little Rock

April

164 The Collection of Morbidity and Mortality Statistics in Relation to the Control of Tuberculosis. D. S. Warren, Washington, D. C.
165 Presentation of Tuberculosis Patients. A. E. Sweatland and D. C. Walt, Little Rock.
166 Prevention of Disease. E. G. Epler, Fort Smith.
167 Removal of a Grain of Corn from the Entrance of the Left Bronchus of a Child Four Years Old. R. H. T. Mann, Texarkana.

Wisconsin Medical Journal, Milwaukee

April

168 Is There a Phthisical Conformation of Chest? W. H. Wash- [illegible]
169 [illegible] t Full Term. Report of Cases.
170 Present Status of the Ocular Tuberculin Reaction. S. G. Higgins, Milwaukee.
171 Chronic Auriculoventricular Heart Block in the Dog. J. Erlanger, Madison.
172 Extradural Hemorrhage. P. F. Rogers, Milwaukee.

169. These cases were reported in an original article by this author, published in The Journal, May 7, p. 1517.

University of Pennsylvania Medical Bulletin, Philadelphia

April

173 [illegible] of the Starch-Dextrin Reaction. E. T. Reichert,
[illegible] E. Lodholz, Philadelphia.
174 [illegible] Benjamin Franklin. W. Pepper, Phila-
175 [illegible]
delphia.
176 Experiments to Determine the Toxicity of Chromic Acid in Dilute Aqueous Solutions when Injected Intramuscularly and Its Antidotal Value for Rattlesnake Venom. W. H. Welker, Philadelphia.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

April 30

1 *The Less Common Aspects of Pneumonia. T. Oliver.
2 *Points Concerning Pneumonia and Pneumococcus Infections in Childhood. T. R. C. Whipham.
3 *Hospital Infection of Tuberculosis. J. E. Squire.
4 Meningitis in Children. G. Rankin.
5 An Immunizing Subinfection in Scarlatina. A. D. Edwards.
6 *Results of Thyroid Treatment in Infantile Wasting. J. W. Simpson.

1. **Less Common Aspects of Pneumonia.**—Oliver has not seen any striking result follow the use of pneumococcus serum, nor can he recall a case of pneumonia having been saved by the inhalation of oxygen. Strychnin and digitalis have given him the best results. With pneumonia, he says, as with many other illnesses, it is not the disease solely that requires to be treated, but the patient with the disease.

2. **Pneumonia in Childhood.**—Whipham emphasizes the fact that while bronchopneumonia is the more frequent type in early life, the lobar variety is commoner than is often supposed. Thus among 150 of his own cases he found that 65, or 43.3 per cent., were of the lobar type. The chief clinical distinction between the two are these: (1) lobar pneumonia is almost always primary, while bronchopneumonia is very frequently secondary; (2) the onset of lobar pneumonia is sudden and the symptoms are well-marked, whereas bronchopneumonia begins insidiously as a rule; (3) the temperature in the lobar form tends to be more uniformly high and to end by crisis, whereas in the other the course of the fever is prolonged and irregular and rarely ends abruptly; (4) lobar pneumonia usually affects a localized area of one lung, at any rate to begin with, while bronchopneumonia is bilateral and more extensive; (5) bronchopneumonia tends to occur at a slightly earlier stage than lobar. Lobar pneumonia, according to Whipham's experience, is most frequent during the second, third and fourth years, 56.9 per cent. of his cases occurring during those years, whereas bronchopneumonia chiefly occurs during the first three years of life, as many as 70.6 per cent. of his cases being found in infants under 4 years of age. In lobar pneumonia one or other of the bases is most frequently attacked, most commonly the left, but in children it is not unusual for the apex of the lung to be affected. It is a remarkable fact that if one apex is involved—primarily and not as the result of the extension of the disease from the lower lobes—it is practically always the right apex which is attacked.

3. **Hospital Infection of Tuberculosis.**—It would appear from the experience of the Mount Vernon Staff, of which Squire is a member, that the risk of infection with tuberculosis in a special chest hospital is very small, and is apparently little, if at all, greater than in a general hospital. It is, perhaps, doubtful if there is any greater risk to the workers in any well-ordered hospital than among the general mass of town dwellers of similar social position. Infection with tuberculosis does occasionally occur as a result of the duties of a nurse, but probably not more frequently among the nurses in a hospital for consumptives than among the general body of nurses. Every occupation has its special risks, and the possibility of infection is one which members of the medical and nursing profession accept as a matter of course. The risk of tuberculous infection, even in a hospital for consumptives, appears to constitute a very slight danger.

6. **Thyroid Treatment in Infantile Wasting.**—Out of a total of 80 patients treated with thyroid by Simpson, 72 were infants under 9 months, and their history was usually one simply of wasting. In the 8 over this age the wasting had supervened after some acute disease. Out of the total (80), 12 died and 5 did not return to the hospital after treatment had been carried on for 2 or 3 weeks. In the 12 cases which ended fatally, 2 children were extremely ill. In both these children the weight was 4 pounds, and both showed evidence of failing

circulation, edema of legs, etc. One died 2 days, and the other 4 days, after being first seen. Two others suffered from marasmus due to congenital syphilis; of the other 8 who died 1 improved for some little time, but eventually died of tuberculous meningitis, 2 were from the country and were only seen a few times, while the remaining 5 did not react to treatment in the slightest degree. The remaining 63, however, all did well. No doubt a number of those infants would eventually have improved on dieting alone, but the fact remains that they failed to put on weight for the first 2 or 3 weeks on such treatment, and that on the addition of thyroid (the same dieting being continued) a number of them at once increased rapidly in weight, while some who remained stationary for a week or two showed beneficial results after that time. Five of Simpson's patients were syphilitic, and wasting was a marked symptom. Mercury was at first given without any effect on the weight, then alone with mercury, thyroid was administered. The result was that 3 out of the 5 infants began to gain and eventually recovered. The other 2 (already noted) did not react at all and death ensued. Of 8 children over 9 months old who were suffering from malnutrition, following an attack of an acute disease, 6 improved on thyroid treatment, 1 died of tuberculous meningitis, and 1 was lost sight of. Simpson has only mentioned 8 cases of older children, but in the last 6 months he has used thyroid frequently for such children suffering from debility after such acute diseases as pneumonia, measles, and whooping-cough. The results have been favorable, except in those cases which proved to be tuberculous; in such cases thyroid treatment would seem to be contraindicated. In the treatment of children under 9 months, Simpson begins with ⅓ grain thyroideum siccum once daily. In older children, he goes up to 1 grain once daily, according to the age of the child. In the giving of thyroid it is advisable, he says, to test the feces to see whether they are acid or alkaline. In 2 cases in which thyroid appeared to produce no good results, he found that the stools were very markedly acid. Sodium bicarbonate was then given 3 times a day, and shortly afterward both children began to improve.

Lancet, London

April 30

7 Amputations at the Hip and Shoulder. C. B. Lockwood.
8 Further Work on the Pressor Bases of the Urine. W. Bain.
9 The Obstruction of the Ileum which Develops in Chronic Intestinal Stasis. A. Lane.
10 Sigmoiditis and Mesosigmoiditis. R. P. Rowlands.
11 Vicious Circles Associated with Disorders of the Nervous System. J. B. Hurry.
12 Origin, Scope and Authority of the British Pharmacopeia. H. W. Gadd.

Journal of Tropical Medicine and Hygiene, London

April 1

13 A Microfilaria in the Blood of a Horse at Khartoum. A. Balfour.
14 The Pathogenesis of the Female Crescent Body. H. M. Neeb.
15 Malaria Treated with Calcium Permanganate. G. A. Stephens.
16 Trichiniasis in a Native of Sierra Leone. D. Burrows.

April 15

17 Bilharzia of Large Intestine. A. W. Jones.
18 The Daily Variation of Body Temperature in Health. M. D. O'Connell.

British Journal of Children's Diseases, London

March

19 Investigation into the Occurrence of Adenoids in Three of the London County Council Elementary Schools (continued). M. Yearsley.
20 Bilateral Cervical Rib in a Child. S. Barling.
21 The Control of Zymotic Enteritis. J. Allan.

Glasgow Medical Journal

April

22 *Carcinoma of the Stomach with Metastases in the Bone-Marrow, and a Blood Picture Suggestive of Pernicious Anemia. A. W. Harrington and J. H. Teacher.
23 Gonorrheal Arthritis Treated by Vaccine Therapy. W. R. Jack.
24 Cases Treated by Injections of Bacterial Vaccines. J. Miller.
25 *Case of Merycism. J. Lindsay.

22. Gastric Carcinoma with Bone Metastases.—In this case the emaciation of the patient and the melena, with a history of occasional dyspepsia, and on one or two occasions of vomiting of brownish material, were sufficient to arouse suspicion. Still the gastric symptoms were not clamant, and on examination of the abdomen nothing abnormal could be made out beyond some distention. No enlarged glands could be felt. The patient's general condition vetoed gastric analysis. The only complaint was of pains in the back and thighs. There was some tenderness in the sacral region and over the left thigh. Any movement of the body or lower limbs appeared to cause great pain. The appearance of the patient was that of a woman who had been losing blood and weight for some time, and her emaciation during her hospital residence was rapid. Carcinoma of the stomach seemed a probable diagnosis. The blood picture was foreign to that usually seen in the anemia of cancer of the stomach, and was suggestive of pernicious anemia. Postmortem showed the tumor of the stomach to be a carcinoma. The secondary growths in the kidney, bone marrow and lymphatic glands showed a tendency to atrophy of the epithelial element and development of fibrous stroma. The white tissue filling the ribs and cancellous heads of the long bones proved also to be tumor. Some parts of the tumor in the bones showed young cellular carcinomatous tissue, but the greater part was more or less degenerated, showing shrunken cells, and a large amount of fibrous stroma. Many large areas consisted of fibrous tissue only, but the nature of this was easily made out by tracing the stages in the transformation between it and the young tumors. Most of the red areas in the ribs were found to represent hemorrhage, but a few were red marrow. The head of the femur likewise contained much more tumor than red marrow; and the vertebral bodies showed a large proportion of marrow, but on the whole, rather more tumor. The red marrow had, in fact, almost entirely disappeared from its normal sites.

25. Merycism.—Lindsay's patient, aged 56, had regurgitated and remasticated his food since boyhood. He began his working life as a baker, and was the fourth generation of his family to follow that occupation. He suggested that the hurried meals and irregular hours attaching to the work of a baker in the country may have had something to do with the habit; but he admits that it had begun while he was still a boy at school. Haste in eating is, however, associated with regurgitation; for the solid portions of a meal that has been imperfectly masticated usually return to the mouth, sometimes half an hour, sometimes three or four hours after being first swallowed. The regurgitation is altogether involuntary, and when his appetite is poor it may not occur for a week at a time. It is not preceded by any feeling of discomfort or other evidence of indigestion. The remastication is pleasurable, the food, he says, being softer and sweeter than when first taken.

Indian Medical Gazette, Calcutta

March

26 The Causation of Diseases of the Heart and Aorta in Europeans in India. J. W. D. Megaw.
27 Gleanings from the Calcutta Postmortem Records. L. Rogers.
28 Technic of Intracapsular Extraction. W. E. McKechnie.
29 Prevention of Hydrophobia. F. A. Smith.
30 Transmission of Plague in the Absence of Rats and Rat Fleas. E. A. Walker.

Australasian Medical Gazette, Sydney

March

31 Medical Inspection. G. H. Hogg.
32 Physical Education. A. B. Brockway.
33 Scope of Hygiene in Modern Education. M. Boot.
34 A Trial of Nastin. J. A. Thompson.
35 *A New Method of Ether Anesthesia. R. W. Hornabrook.
36 Treatment of the Varied Manifestations of Tuberculosis. H. C. Hinder.
37 Cervical Laminectomy for Trauma of the Neck: Recovery. H. R. Cope.
38 Chorioepithelioma Malignum. C. E. Todd.
39 Lymphatic Leukemia in a Child of 3½; Blood Examination. E. C. Chisholm.
40 Extrauterine Pregnancy with Enormous Enlargement of the Fallopian Tube, but no Rupture. E. F. Sezke.
41 Raynaud's Disease. R. W. Stewart.

35. New Method of Ether Anesthesia.—The method used by Hornabrook is one of open ethyl chlorid followed by open ether. The mask used is an ordinary wire frame, covered with one layer only of very thin flannel. The mask is placed on the patient's face, and the patient told to breathe quietly and naturally; that there will be no unpleasant sensation of suffocation, and that after a few drops of the anesthetic have been placed on the mask a pleasant floating sensation will come over him. The ethyl chlorid is dropped, not sprayed on to the mask. If ethyl chlorid is sprayed on, it freezes on the mask, does not act so well on the patient, and more is used than necessary; the drops should be rapid and spread over a wide area: from 3 to 8 c.c. are generally required. Hornabrook has never seen any sign of collapse under this open ethyl chlorid method, and in one case 25 c.c. were dropped on the mask to try its effect on the patient. The patient passes under the anesthetic rapidly and pleasantly, without any feeling of suffocation or discomfort. After 5 c.c. of ethyl chlorid have been dropped on the mask, a few minims of ether are dropped—that is in ordinary women or anemic men; if the patient is full-blooded or alcoholic, it is better to pass from ethyl chlorid to chloroform before going on with the ether. As a rule not more than 30 minims at the most of chloroform are necessary before muscular relaxation is obtained, and ether can then be substituted. Muscular relaxation when once obtained does not return to rigidity except in very rare instances, and even if it does, a few drops of chloroform will reduce it. The time taken to place the patient under anesthesia ready for the knife is from three to five minutes from the first drops of ethyl chlorid. A patient can be maintained under this open ether for any length of time. There is practically no secretion of mucus, so that the air passages remain clear; the breathing is quiet and easy; the color of the patient remains excellent, it being very rare to see blueness, even in prolonged cases; the patient recovers from the anesthetic very quickly; the pupils should be maintained very active and of medium size throughout; and the upper lid should remain elastic to the touch. Care must be taken that the anesthetist has two masks, for after a time a coating of moisture forms on the under surface of the flannel and this acts as a barrier between the patient and the ether, so that the patient gets none or very little ether in spite of the quantity poured on the mask, and the patient then commences to come out. The mask should be changed for a dry one before this happens, and the old one wiped free from moisture to be used again later; it may be necessary in a prolonged operation to change the mask more than once. The amount of ether poured on the mask varies with the length of the operation, but, speaking generally, about 20 minims every half minute, the quantity used is from 4 to 5 ounces in the first hour and less in the second. The state of anesthesia induced is light, the muscular relaxation good, and even should there be rigidity, as may be the case, it is easily overcome with a few drops of chloroform. The patient can be brought out of the anesthesia very easily and rapidly, in fact, in many respects it resembles sleep rather than deep narcosis of an anesthetic, the shock of even a very prolonged and severe operation is well-borne, the patient being in no way depressed as he would have been under chloroform, or irritated by concentrated ether vapor and excessive secretions of mucus as under a closed method.

Australasian Medical Journal, Melbourne

March 20

42 Relative Value of Chloroform and Ether as General Anesthetics. E. H. [illegible]
43 Ether Anesthesia.
44 *New Method of Ether Anesthesia. R. W. Hornabrook.
45 An Apparatus for the Continuous Administration of Saline and Other Fluids by Rectum. J. Ramsay.
46 *Infantile Gastroenteritis.* R. L. Forsyth.
47 Rouleaux Formation of the Blood Cells. A. E. Taylor.

44. See abstract No. 35.

Annales des Maladies des Org. Génito-urinaires, Paris

March 20, XXVIII, No. 6, pp. 481-576

48 False Passages Caused by the Catheter. (Des fausses routes.) F. Leguen.
49 *Value of and Indications for Pyelotomy for Removal of Calculi in the Renal Pelvis. C. Périneau. Commenced in No. 4.
50 Advantages of Suprapubic Incision with the Bladder Empty. (La taille hypogastrique à vessie vide.) F. Lastaria.
51 Gonococci and Pseudogonococci. L. Wormser.

April 1, No. 7, pp. 577-672

52 *Pathogenesis of Renal Hematuria.* B. Motz.
53 Case of Hydronephrosis from Obstruction of Ureter with a Stone Afterward Partially Absorbed. E. Hauch and J. E. Lohse.
54 Pathogenic Rôle of Abnormal Renal Arteries. A. Pousson.

49. Superiority of Pyelotomy.—Périneau advocates this operation as no more serious than nephrotomy, while it spares the kidney parenchyma and there is less danger of hemorrhage and tendency to a fistula later. Calculi are more frequently found in the renal pelvis and the pyelotomy permits retrograde probing of the upper ureter to determine the presence of other stones. He declares that, accompanied by Roentgen-ray examination, pyelotomy is destined to take the first place in operations for calculi in the calices, pelvis and upper ureter. His article is based on 103 operations of the kind done at the Lariboisière hospital.

52. Hematuria.—Motz ascribes renal hemorrhage to some inflammatory lesion rather than to mere congestion.

Archives des Maladies de l'App. Digestif, Paris

March, IV, No. 3, pp. 113-176

55 Two Cases of Stenosis of Esophagus and Pylorus from Action of Caustic. P. Duval and G. Pascalis.
56 *Indirect Method for Estimating Total Amount of Gastric Content. (Modification de la méthode de *Mathieu-Rémond.*) A. Laboulais and R. Goiffon.
57 Remote Results of Gastroenterostomy in Non-Cancerous Stenosis of the Pylorus. T. Papadopoulos.

56. Simplification of Mathieu Method of Determining Amount of Stomach Content.—The technic was mentioned in The Journal, April 2, 1910, page 1175.

Archives de Médecine des Enfants, Paris

April XIII, No. 4, pp. 241-320

58 *Importance of Sterilizing Infants' Clothing. (Emploi de linges stérilisés chez le nourrisson.) E. Weill.
59 *Mechanical and Bloodless Method of Inducing Albuminuria* and Nephritis in Rabbits. R. Fischl.
60 *The Meningeal Reaction in Chronic *Encephalopathies* in Children. R. Voisin and G. Paisseau.

58. Importance of Sterilizing Infants' Clothing.—A similar article was abstracted in The Journal, Dec. 18, 1909, page 2136.

60. Meningeal Reaction in Encephalopathies.—Voisin and Paisseau report three cases which emphasize the necessity in every case of meningeal symptoms for inquiry as to the inherited taints, the course of the birth, mental development and development and functioning of the legs. Lumbar puncture is useful to exclude meningitis. Any casual intoxication or infection is liable to rouse an old silent lesion of the nerve centers or at least render it clinically appreciable.

Bulletins de la Société de Pédiatrie, Paris

March, XII, No. 3, pp. 129-187

61 Symmetrical Vascular Nevi. C. Leroux and R. Labbé.
62 Enlarged and Indurated Thymus in Boy of 4. Thymectomy, Tracheotomy and Resection of the Manubrium. *Fatal Mediastinitis.* M. D'Oelsnitz, Prat and Boisseau.
63 Severe Erythemas in Course of Typhoid. L. Ribadeau-Dumas and Harvier.
64 Meningeal Reactions in Scarlet Fever. G. Paisseau and L. Milhit.
65 Determination of Stercobiline as *Aid to Prognosis.* (Recherche de la stercobiline par le sublimé acétique comme élement de pronostic.) E. C. Aviragnet and Dorlencourt.
66 Occult Intestinal Hemorrhage and Helminthiasis in Children. (Entérragies occultes et helminthiase intestinale chez les enfants.) G. Railliet.
67 Steeple-Shaped Head with Atrophy of Optic Nerve. (Oxycéphalie avec atrophie optique.) F. Terrien.
68 *Hemorrhage in Suprarenals Due to Chloroform. M. Savariaud, *Pellot* and Tinel.

68. Hemorrhage in Suprarenals After Chloroform Anesthesia.—The patient was a boy of 8 requiring a 20 minute operation to correct eventration 18 months after appendicectomy. The operation and anesthetization proceeded smoothly but soon afterward the child became very restless and signs of acute intoxication became apparent—green diarrhea, vomiting, profound depression, drop in the blood pressure, extreme tachycardia and tendency to erythema; the little patient died in six days, the syndrome in general suggesting acute suprarenal insufficiency of a pseudoperitonitic form. All the organs were found congested but the suprarenals had been the seat of extensive hemorrhage.

Lyon Médical, Lyons

March 27, XLII, No. 13, pp. 677-744

69 The Physiologic Value of the Leucocytes, and Its *Appreciation* by Means of "Vital Staining." A. Policard.

April 3, No. 14, pp. 745-796

70 Bronchoesophagoscopy. A. Sargnon.

April 10, No. 15, pp. 797-852

71 Operative Treatment of Hypertrophy of the Thymus Plus Tracheal Stenosis in *Four-Months-Old* Babe. E. Weill, M. Pébu and J. Chalier.

Presse Médicale, Paris

April 20, XVIII, No. 32, pp. 289-296

72 *Albumin Reaction in the Sputum. (Albumino-réaction des expectorations.) H. Roger and Levy-Valensi.

April 23, No. 33, pp. 297-312

73 Experimental Research on Acute Epidemic Poliomyelitis. C. Levaditi.
74 Primary Tumors of the Blood-Producing Tissues. (La lymphadénie atypique.) M. A. Clerc.
75 Sympathetic Aches and Hyperesthesia of the Abdomen. (Les algies sympathiques et l'hyperesthésie de l'abdomen.) M. Loeper and C. Esmonet.
76 Fracture of the Base of the First Metacarpal Bone. S. Rolando.
77 Serotherapy of and Vaccination Against Acute Articular Rheumatism. G. Rosenthal.

72. **Albumin Reaction in Sputum.**—Roger and Valensi state that sputum from the tuberculous always contains more or less albumin, while a mild, simple bronchitis or pulmonary emphysema does not add this albuminous element to the sputum. Its presence indicates a deeper inflammation or exudation. The absence of albumin thus permits tuberculosis to be excluded; its presence has less decisive value as there are a number of processes that may cause albumin to appear in the sputum. They relate experiences to show the simplicity and ease of the albumin sputum test. The sputum is collected in a dry recipient, as free from saliva as possible, never using sputum containing blood. The sputum must be fresh, as decomposition splits the mucin and liberates albumin. It is mixed with an equal amount of water, stirred and a few drops of acetic acid added to coagulate the mucus. The mixture is then filtered through ordinary filtering paper and heated to coagulate the albumin; a little sea salt has to be added to ensure the coagulation of the albumin in the absence of electrolytes; other means can be used to test for the presence of albumin. In 64 cases of tuberculosis and in 20 reported by Oddo the findings were almost invariably positive. This was particularly important in 31 cases in which the diagnosis was wavering and the finding of albumin in the sputum aided in differentiating the disease; the diagnosis was confirmed by the course of the cases later. In one case the test was negative as also the tuberculin test until a large dose of tuberculin was given when there was a febrile reaction and albumin was found in the sputum, but as soon as the reaction had subsided all the findings were negative again and the patient has been in good health since. This case demonstrates the value of the albumin reaction, as negative findings, even with tuberculous infection, show that the process has been arrested.

Revue de Chirurgie, Paris

March, XXX, No. 3, pp. 327-562

78 Gunshot Wounds of the Knee. (Des corps étrangers "projectiles" de l'articulation du genou.) E. Quénu.
79 Arteritis and Arterial Embolism with Uterine Fibroma. A. Schwartz and L. Bory.
80 *Caries of the Hip Joint without Effusion in Relation to Deforming Juvenile Paralysis. (La carie sèche de la hanche et l'arthrite déformante juvénile.) G. Rottenstein and G. Houzel. Commenced in No. 2.
81 Tumors of the Submaxillary Gland. M. Chevassu. Commenced in No. 2.

April, No. 4, pp. 563-750

82 *Continuous Stream of Oxygen in the Treatment of Abdominal Disease. (De l'emploi du courant continu d'oxygène en chirurgie abdominale.) T. Weiss and L. Sencert.
83 *So-Called Idiopathic Hematuria. (Sur les hématuries dites essentielles.) R. Robinson and J. Jacoulet.
84 *Ischemic Paralysis and Contracture of Volkmann. (Quelques notions fondamentales sur la retraction musculaire ischémique de Volkmann.) A. Binet. Commenced in No. 3.
85 *Paralysis with Dislocation of the Shoulder. (Les paralysies dans les luxations de l'épaule.) P. Delbet and A. Cauchoix.

80. **Dry Caries of the Hip Joint.**—The authors state that this special form of tuberculous arthritis in the hip is analogous to that known as Volkmann's dry caries of the shoulder. The lesions have been described under the heading of juvenile deforming osteoarthritis or torpid or atypical coxalgia. Pain, functional impotence and muscular contracture are the main features at first; the absence of fungous granulations and of effusion is also characteristic. The affection tends to a spontaneous cure by ankylosis, the course lasting two years at least. In three of the ten cases mentioned operative treatment was applied on a mistaken diagnosis, but continuous extension with plaster immobilization to favor ankylosis in a good position is the treatment recommended. The article is accompanied by the bibliography.

82. **Continuous Current of Oxygen in Treatment of Abdominal Disease.**—Weiss and Sencert discuss the value and the mode of action of the application of a constant stream of oxygen in the treatment of surgical abdominal affections. The hundreds of cases in which the method has been applied abundantly confirm the advantages of this method, which is based on the biologic properties of oxygen, the results of experimental research and histologic examination demonstrating that in the presence of microbes the oxygen promotes the diapedesis of white corpuscles, augments their phagocytic properties, and stimulates the vitality of the reparative elements. They have applied the method in gaseous gangrene, suppurating arthritis, purulent pleurisy, diffuse phlegmon and osteomyelitis and chronic suppuration with compound fractures—the results were always good but it was after operations that it proved most beneficial. They review their experience in detail, reiterating that oxygen injected into the abdominal cavity has an important stimulating action on the cardiovascular and respiratory system; it prevents the formation of adhesions, induces hyperemia and promotes healing, and in case of intraabdominal septic effusions, arrests absorption of septic fluids. Its curative action is enhanced if it is transformed *in situ* into ozone by Roentgen-ray exposures. The oxygen is introduced in a continuous flow through a buttonhole in the anterior abdominal wall and it flows out through various drains, the cavity thus being continually flushed by the gas. It forces out along with it pus and serous effusion, aiding materially in the draining and cleansing of the cavity. Weiss and Sencert give the details of 5 cases in which oxygen irrigation was applied, and will continue their report in the next number of the *Revue*.

83. **Idiopathic Hematuria.**—Robinson and Jacoulet discuss hematuria of angioneurotic, toxic, portal and varicose origin and hematuria from efforts, showing that medical treatment may give good results in all these forms of so-called idiopathic hematuria. It is beyond question, they state, that hematuria may occur without any lesions in the kidney, and that medical treatment will generally prove successful. If operative interference becomes necessary, nephrotomy is the best technic for the purpose, followed by suturing. Nephrotomy seems to have a double action, relieving congestion at once and later reducing the arterial afflux by obliteration of some of the vessels. The functioning of the kidney does not seem to be affected by incision and prompt suturing of the kidney, owing to the compensating hypertrophy of the intact parts of the organ. The various experiences that have been published are reviewed in detail. The view formerly accepted that some lesion in the kidney always preceded the hematuria has been disproved, the authors assert, by the later experiences and researches.

84. **Ischemic Paralysis and Contracture of Volkmann.**—Binet's monograph is based on 141 cases including one from his own experience, and discusses the cause and treatment. He states that the physician cannot be regarded as responsible for this syndrome except in case of great negligence. In treatment the best technic is by a plastic operation on the tendon with resection of the radius and ulna, which seems to be the only means for radical treatment of this ischemic retraction.

85. **Paralysis from Dislocation of the Shoulder.**—Delbet and Cauchoix insist on the importance of operative treatment as early as possible before the sclerous perineuritis completely destroys the conducting power of the nerves. They have found thirty-six cases on record which they review in detail with the technic for operative treatment.

Revue de Médecine, Paris

April, XXX, No. 4, pp. 233-344

86 New Research on the Intestinal Poisons. H. Roger and M. Garnier.
87 Rôle of the Leucocyte Ferments in the Resolution of Pneumonic Exudate. (Etude de la crise pneumonique.) N. Fiessinger and P. Baufle.
88 Remote Propagation of Pericardial Friction Sounds. (Propagation des frottements péricardiques.) J. Paviot and J. Delachanal.
89 Scarlet Fever. III. (La scarlatine à l'hôpital Claude-Bernard en 1908.) A. Gouget.
90 Myelogenous Osteopathies. (Rachitisme.) L. Bernard.

Semaine Médicale, Paris

April 27, XXX, No. 17, pp. 193-204

91 Relative Rarity of Acute Tuberculosis Among the Jews. (La tuberculose chez les juifs.) L. Cheinisse.

Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

XV, No. 2, pp. 166-316. Last indexed Jan. 29, p. 417

92 Relation of the Lower Segment of the Uterus to Placenta Prævia. H. Bayer.

93 Anatomic-Physiologic Reasons for Capacity for Breast Nursing or the Lack of It. (Stillungsfähigkeit und ungenugende Stillfähigkeit aus anatomisch-physiologischen Gründen.) K. Hegar.

94 The Causes of Infantilism. F. A. Kehrer.

95 Decidua Cells and Their Importance. F. Ritter.

96 *Graft Metastasis of Cancer in Laparotomy Incision. (Zur Frage der Implantationsmetastasen in der Laparotomiewund nach Extirpation karzinomatöser Genitalorgane.) H. Raabe.

97 Failure of Methods for Predetermination of Sex. (Zur Frage der Vorausbestimmung des Geschlechts beim Menschen.) [illegible]

98 [illegible] in the Ganglion Cells of the Human [illegible] Spinal Anesthesia. (Veränderungen der [illegible] s menschlichen Rückenmarks bei der Lumbalanästhesie.) J. Ogata and G. Fujimura.

96. **Operative Graft Metastasis of Cancer.**—Raabe reports a case of primary carcinoma in a Fallopian tube with metastasis in the abdominal wall, and another of a carcinomatous tubal cyst with metastasis in the ovary. According to his compilation, the first is the eighty-second case on record of a primary tubal carcinoma and the other the thirteenth tubo-ovarian cancerous cyst. From his study of the anatomy of the parts and of the literature he is convinced that there is no case on record of true operative graft metastasis in the laparotomy wound after removal of carcinomatous genital organs.

98. **Transient Changes in Spinal Cord After Spinal Anesthesia.**—Ogata and Fujimura were able to demonstrate histologic changes in the ganglion cells after spinal anesthesia. The course of the two cases studied and the findings in the animals, however, indicated complete restitution after a certain interval.

Beiträge zur klinischen Chirurgie, Tübingen

March, LXVI, No. 2, pp. 193-461

99 *Hernial Sac Tissue for Substitution of the Dura and Its Importance for Operative Treatment of Jacksonian Epilepsy. (Ueber den plastischen Duraersatz und dessen Bedeutung für die operativen Behandlung der Jackson-Epilepsie.) H. Finsterer.

100 Unusual Case of Internal Incarcerated Hernia. (Fall von innerer eingeklemmter Hernie.) H. Finsterer.

101 Perforation of Rectum with Consecutive Peritonitis. A. Kimmerle.

102 *Ultimate Result of Operative Treatment of Traumatic Jacksonian Epilepsy. K. Cluss.

103 Autoplastic Substitution of Finger Tendons by Tendons from Back of Hand. (Autoplastischer Ersatz der Streck- und der Beugesehnen der Finger durch entbehrliche Sehnen des Handrückens.) V. v. Hacker.

104 Compound Traumatic Injuries of the Bladder. (Zur Kasuistik der offenen traumatischen Verletzungen der Harnblase.) P. Wolfer.

105 [illegible] Examination of Fracture in Child's Skull. (Ueber [illegible] bei Kindern im Röntgenbilde.) H. G. [illegible]

106 The Leucocytic and Fluid Defenses of Human Organism against Bacterial Infections. (Die leukocytären und humoralen Kampfmittel des Menschen gegen bakterielle Infektionen.) H. Rubritius.

107 *Tuberculous Stenosis of the Pylorus. H. v. Tappeiner.

108 Local Anesthesia Supplemented by Epinephrin Anemia, Especially for Operations on Head and Throat. (Zur Anwendung der Lokalanästhesie und Suprareninanämie.) F. Peuckert.

109 Experimental Research on Surgery of the Bronchus. M. Tiegel.

99. **Operative Treatment of Jacksonian Epilepsy.**—Finsterer reports that he introduced a piece of hernial sac under the dura to prevent the latter's growing to the pia and brain below. This was done at a second operation, the first having been done to remove a splinter of bone, and the second to correct the adhesion of the dura to the brain. Hacker has been using for some time pieces of hernial sac, obtained at a herniotomy on another patient, as an effectual means for preventing the growing together of tissues in operations on tendons and nerves, and experiments on animals have confirmed the advantages of this material for use under the dura. The results have been followed for a year to date in some of the experiments. In conclusion, Finsterer reports a second case in which the subdural implantation of a piece of hernial sac has also put an end to the disturbances to date; it was done at the fourth operation in this case, the implantation of a celluloid plate not having arrested the convulsions for more than a year.

102. **Ultimate Outcome of Operations for Jacksonian Epilepsy.**—Cluss reports a case in which the patient was operated on over 18 years ago for Jacksonian epilepsy and has had no further signs of the trouble since the operation. The patient at the time of the trauma was 24 years old; the first operation revealed a subdural cyst in the cortex which was excised. A few mild seizures were observed during the first six months after the operation but none since then. In connection with this case he reviews 21 others in the literature in which operative treatment has been followed by a cure for more than 3 years. Recurrence has been known even after an interval of 3 or 5 years of apparent health. Patients under the age of 30 are more liable to complete recovery after operation. The duration of the latency or active phase of the epilepsy does not seem to have a decisive influence on the results of surgical treatment. The prospects of benefit are better when there are gross local changes than in the absence of such. Temporary resection of the skull is advisable, he believes, to obtain insight into conditions. The dura should be incised, but it is not necessary to make a dura valve, and neither is it indispensable that the center involved should be resected. Paralysis from resection of brain substance generally disappears entirely after a time.

107. **Tuberculous Stenosis of the Pylorus.**—Tappeiner reports a case in which a boy of 12 had suffered for about 9 months from pains in the stomach and vomiting, rare at first but gradually becoming more frequent until they occurred after every meal and the child lost 17 pounds in weight. On the diagnosis of pyloric stenosis gastroenterostomy was done, and great improvement followed. The stenosis proved to be, as suspected, of a tuberculous nature but the child's condition did not permit resection. In 26 similar cases of tuberculous stenosis in the literature, resection was done in 8 cases, and in the others gastroenterostomy, excision of the ulcer, pyloroplasty or merely an exploratory laparotomy. Nearly all the patients succumbed within a year to the progress of the tuberculosis in other organs. In 4 cases the patients were under 20, in 7 over 40.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 1, XL, No. 10, pp. 289-320

110 Serodiagnosis of Syphilis. (Betrachtungen über die Serodiagnostik der Syphilis auf Grund praktischer Erfahrungen und statistischer Ergebnisse.) G. Seiffert and P. Barteczko. Concluded in No. 11.

111 Cammidge Reaction Not Specific for Pancreatic Disease. E. Bernoulli.

April 10, No. 11, pp. 322-352

112 *Preventive Serotherapy of Tetanus. (Zur Präventivimpfung bei Tetanus.) E. Bär.

112. **Preventive Serotherapy for Tetanus.**—Bär reports two cases in which preventive injection of 10 c.c. of antitetanic serum did not prevent the development of the disease, although in one the symptoms were restricted to the arm, the local tetanus running its course to recovery in a week. In the other there were no symptoms for four weeks when fulminating general tetanus developed.

Deutsche medizinische Wochenschrift, Berlin

April 21, XXXVI, No. 16, pp. 737-784

113 *Treatment of Hyster[illegible]

114 *Differentiation of [illegible] Palpitations and Angina Pectoris. [illegible] er neurasthenischen [illegible] Angina pectoris.) Schmerzen. Nervö[illegible] J. Kollarits.

115 *Material Bases for and Prognosis of Traumatic Neuroses after Concussion of the Brain. (Kommotionsneurose.) M. Friedmann. Commenced in No. 15.

116 *Comparative Research on Wassermann and Globulin Reactions and Lymphocytosis with Organic Nervous Disease. ([illegible] Reaktion, Lymphozytose und Globulinreaktion [illegible] des Nervensystems.) A. Wolff.

117 [illegible] Light Touch Palpation as Signs of Lung Disease. (Rigidität der Muskeln und die leichte Tastpalpation als wichtige Zeichen zur Erkennung der Lungenkrankheiten.) F. M. Pottenger and A. Wolff-Eisner.

118 *Dilatation of Prostatic Urethra in Treatment of Hypertrophy of the Prostate. (Zur Behandlung der Prostatahypertrophie durch Prostatadehnung.) F. Kraemer.

113. **Nature and Treatment of Hysteria.**—Romberg explains hysteria as a congenital morbid disturbance in the course of

associations; in hysterical anesthesia the periphery feels, the spinal cord conducts and the central convolution receives, but the complicated phenomena on the other side of the cortex are lacking. No conscious impression results. If it is possible to restore the association here normal conditions return, and some slight impetus may restore the consciousness which awakes like the sudden remembrance of a word that has momentarily escaped the memory. In children and in persons whose mental development is not much beyond that of childhood, this restoration occurs particularly easily because the physiologic development favors the reception of new associations. Thus the child hangs on the words of the story-teller while it is difficult to fasten the interest of adults. In treatment it is important to accept the disturbances as real. It is wrong to exhort patients to exert their will; the aim should be to divert attention from the disturbances. He remarks that many cases of hysteria in children are really only the hysteria of the mothers. It is important, he adds, to seek to train the abnormally functioning associations, especially by light systematically increasing work. This diverts the mind, which pleasure, theaters, etc., fail to accomplish. The measures which cure by a sudden impression are more liable to be effectual with children and persons with uncultivated minds. The after-treatment is extremely important following a cure of this kind, not allowing from any one expressions of surprise or suggestion that the trouble had been due to the lack of will power. The recovered functioning should be promoted by systematic exercise. The main point is to have the physician win the confidence of the patient and avoid everything tending to mysticism, especially hypnosis.

114. **Differentiation of Neurasthenic Pains.**—Kollarits calls attention to the fact that neurasthenic pains are generally improved by movement, contrary to the pain in true rheumatism and arthritis. This applies also but less constantly to neurasthenic palpitations and pseudoangina pectoris. The physician should ask whether the pain is increased by movements or walking or becomes less, with care to refrain from suggesting the answer. With the attack of neurasthenic pain, the patient generally jumps up and walks to and fro, during which the pain subsides. The attack of pain is often accompanied by general restlessness, palpitations and sweating. The neurasthenic pain in a joint is not very violent but is more a sensation of pressure or smarting. Neurasthenics are generally extremely sensitive to heat and to constriction from tight collars. Nervous pains are not benefited by hot water treatment; exercise in the open air is the main reliance. Kollarits adds that if digitalis is given at all, it must be given with great care as it is liable to do harm if the patient knows he is taking digitalis, this confirming him in the idea of organic heart disease.

115. **Traumatic Neurosis After Concussion of the Brain.**—Friedmann states that no one needs to be spared so much as a patient during the first two years after a concussion neurosis. Increasing experience with industrial accidents has taught that the course is toward gradual improvement to complete recovery, even with concussion of the brain. After from 4 to 7 years from 60 to 70 per cent. of the patients may be regarded as essentially cured. The worst factor in the matter of traumatic neuroses, he declares, is not the patient's weak will nor his desire for sick pay, but it is the attitude of the employers who dislike to employ these semi-invalids. Partial earning capacity is therefore about equivalent with total incapacity and the injured workingman has every reason to strive to obtain the highest possible indemnity, especially if he is near the age of 40.

116. **Comparative Research on Wassermann and Globulin Reactions and Lymphocytosis in Differentiation of Nervous Disease.**—Wolff tabulates the findings with these three tests applied to the spinal fluid, remarking that the globulin reaction is the most instructive as it is invariably negative when there is no existing parasyphilitic or metasyphilitic nervous affection, even with a history of old syphilis. (The globulin reaction or "phase I" was first described by Nonne and his work on the subject was published in The Journal July 24, 1909, page 289.) The Wassermann and globulin reactions in the spinal fluid were constantly negative in 6 cases of neurasthenia and 6 of epilepsy, while the globulin reaction was always positive in 40 cases of tabes, 30 of paralytic dementia, and 7 out of 8 cases of cerebrospinal syphilis.

118. **Treatment of Hypertrophy of the Prostate by Dilatation of the Prostatic Urethra.**—Kraemer followed Bayer's advice as a last resort in a recent severe case of enlarged prostate, the patient having refused to submit to an operation, and began systematic dilatation of the constricted upper end of the urethra. The patient was a man of 66 who after a five-day attack of ischuria was unable to void normally a drop of urine for more than five weeks. Then dilatation was commenced, using first a Béniqué sound, caliber 23, 24 and 25 French. In the course of 11 days and 8 sittings the caliber was increased gradually and the dilatation was finally completed with a rapid dilator, the lumen thus being opened to a caliber of 44, equivalent to a lumen of 1.6 cm. When any blood was noticed in the urine a retention catheter was introduced and left for a day or two. By the end of the 11 days the patient was urinating spontaneously without trouble, and when last heard from, a month after the dilatation, he was spontaneously voiding an average of 2 liters of urine daily. Bayer uses a special dilator with which he is able to dilate the lumen to 2 cm. without injury of the urethra as he determined by tests on the cadaver. In his 11 cases, 4 of the patients were permanently cured, he states, and 3 materially improved, but no benefit was derived in 3 other cases with extreme hypertrophy and cystitis. Kraemer did not attempt the dilatation until after he had cured the complicating cystitis by appropriate measures in his case.

Medizinische Klinik, Berlin

April 24, VI, No. 17, pp. 653-690 and Supplement

119 Operative Treatment of Extreme Myopia. (Operation der Kurzsichtigkeit höchsten Grades.) W. Goldzieher.
120 *Thickness of the Adipose Tissue in Abdominal Wall as Index of Condition of Nourishment in Adults. (Die Fettpolsterdicke als index der Ernährungszustandes bei Erwachsenen.) G. Oeder.
121 Transplantation of Tissues. (Zur Gewebstransplantation.) C. Ritter.
122 *[illegible] Gastrointestinal Hemorrhage. [illegible]; okkulter Magen-und Darm- [illegible]menced in No. 16.
123 [illegible] (Entstehung der Kehlkopftuberkulose [illegible]
124 Therapeutic [illegible] Thermal Waters. Chabrol.
125 *Pericarditis [illegible] Klinik der Pericarditis exsudativa.) R. Bernert.

120. **Thickness of the Abdominal Wall as Index of State of Nourishment.**—Oeder has been seeking for years for some means to express the general state of the nourishment of patients and has tabulated the findings in regard to height, weight, size, chest measure, etc., but no formula that he was able to work out from them seemed to express the actual condition of the nourishment. On the other hand, the thickness of the layer of adipose tissue in the abdominal wall seems to be directly proportionate to the general state of the nourishment. In 1,920 separate examinations he found 936 persons of the lean type, 607 of the normal and 377 of the fat type. He estimates the thickness of the fat by taking up a fold to the right of the umbilicus and measuring it with calipers. With the lean type the fold measures from 0.75 to 3.5 cm., averaging 1.1 cm. or nearly half an inch; with the normal type about 2.75 cm., or 1⅛ inches, and with the fat type, 4.41 cm., or 1¾ inches. All adults therefore with this index larger than 2 inches should be regarded as abnormal, as also those with an index of less than ⅜ inch. The difference for sex, age and height is so small that it can be disregarded. This index may throw light on individual indications, whether more nourishment is needed or more exercise, and when normal conditions have been attained under dietetic or other treatment.

122. **Occult Hemorrhage in Gastrointestinal Tract.**—Kuttner reviews the information to be derived from discovery of occult blood in the stool or stomach content but he warns that many causes may be responsible for it. Occasionally the occult bleeding may give the clue to the correct diagnosis, but, as a rule, its discovery does not throw light on the diagnosis but tends to make it still more laborious.

125. **Pericarditis with Effusion.**—Bernert reports 4 cases of pericarditis with effusion in which there were a number of

atypical features. The patients were young men between 21 and 24 and the extensive effusion occurred again and again, but seemed to be entirely absorbed during the intervals. The intermittent-remittent effusion developed and was reabsorbed with remarkable rapidity. In one case there was nothing left of the large effusion by the end of the week; then it rapidly returned but subsided anew within 2 days and not a trace was left by the end of another 3 days. Another striking feature of the cases was the sac-like protrusion of the left lower side of the pericardium. In some of the cases the pulse was smaller in the left carotid and radial arteries than in the corresponding vessels on the right side, but this sign of compression from the large pericardial effusion disappeared as the effusion retrogressed. The same cause may induce transient dilatation of the pupil on one side from irritation of the sympathetic. The involvement of the phrenic nerve may entail paresis of half of the diaphragm and hiccough and involvement of the vagus, vomiting and violent coughing. He discusses in detail the percussion findings with this atypical intermittent form. There was a history of acute articular rheumatism in only one of the four cases reported; the others were evidently of tuberculous origin. Enlarged glands at the hilus of the lung were manifest in each. In all the cases the affection progressed to adhesive pericarditis.

Monatsschrift für Geb. und Gynäkologie, Berlin

April XXXI, No. 4, pp. 415-546

126 Slowing of the Pulse During the Puerperium and Its Cause. (Pulsverlangsamung im Wochenbett und ihre Ursache.) L. Lewisohn.
127 Axial Torsion of the Gravid Uterus. (Achsendrehung des schwangeren Uterus.) L. K. Glinski.
128 *Treatment of Rupture of the Uterus. E. Issel.
129 *Rupture of the Symphysis During Delivery. L. A. Kriwski.
130 *Indications for and Advantages of Cold Irrigation of the Vagina. (Ueber kalte Scheidenirrigationen.) T. Alexandrow.
131 Intraperitoneal Shortening of the Round Ligaments. (Ueber intraperitonealer Verkürzung der Ligamenta rotunda.) M. Hirsch.

128. **Treatment of Rupture of the Uterus.**—Issel reports 9 cases of rupture of the uterus during delivery. The 2 fatalities were from peritonitis resulting from the reduction of the intestines prolapsed into the vagina, five hours before the operation, in one case, and from hemorrhage on the operating table in the other case. Immediate ligation of the hypogastric and ovarian veins on both sides is an important factor in treatment; it spares the patient further loss of blood and the operation proceeds in a bloodless field. He advocates prompt abdominal hysterectomy, as fatal rupture is peculiarly liable at a later pregnancy when the first rupture was given merely conservative treatment. The communication issues from Krönig's obstetric service at Freiburg. The general practitioner is advised to send the patient to a hospital as soon as the rupture is discovered, refraining from any attempt to complete the delivery. The experience of Schütte, Petren and others that these ruptured women are able to stand transportation even from a considerable distance was confirmed in Issel's cases, one patient being brought from a neighboring town to the clinic. The patient either succumbs at once to the hemorrhage—which is rare—or small repeated hemorrhage occurs, allowing time for the woman to be taken to a hospital. If conditions are favorable, the abdominal hysterectomy can be done in the home. If institutional care is not attainable, the delivery can be cautiously completed, followed by tamponing, or if the hemorrhage is not severe, by merely draining the wound cavity. With one exception, a primipara of 29, his patients had all borne from 5 to 8 children. In this case the posterior vault of the vagina was accidentally perforated about 3 hours after spontaneous childbirth, during an attempt to separate the placenta by hand. The abdomen was opened and the vaginal wall found torn from the uterine cervix; the tear was readily sutured and the abdomen closed without further interference. The patient was discharged cured after passing through a severe puerperal fever. Hysterectomy was done in all but one of the other cases, with or without leaving the adnexa intact on one or both sides.

129. **Rupture of the Symphysis During Delivery.**—Kriwski's patient was a woman of 33 who had already borne 6 children, the deliveries being normal and unusually rapid. The seventh pregnancy had been preceded by typhoid; after the onset of labor there were two attacks of convulsions and labor was prolonged for over 24 hours. Then forceps were applied and a very large child delivered. A cracking sound was heard during the traction with the forceps, and after extraction of the child blood issuing from the urethra directed attention to the rupture of the symphysis; two fingers could be inserted in the gap. The hemorrhage soon ceased spontaneously and the patient recovered without further mishap except for persistence of tenderness in the sacral region and incontinence of urine. She did not complain of pain or tenderness in the symphysis at any time. The tendency to incontinence seems to be growing less; it is probably the result of some tear in the urethra near the sphincter.

130. **Application of Cold in the Vagina.**—Alexandrow uses a coil of tubing wound so as to fit over the cervix and against the deeper vaginal walls, and sends ice water through the tubing. His experience with this cold irrigation, he says, has been gratifying in the suitable cases. He describes some of his clinical experience and his experimental research in this line, reiterating that both cold and hot applications should be regarded as important therapeutic measures in treatment of the female sexual organs. Cold irrigation is indicated to enhance the action of unstriped muscle, either in the vessel walls or in the supporting ligaments. Hot irrigations are useful to increase the absorbing power of the vascular apparatus, as the arterial hyperemia induced favors absorption of effusions in the pelvic connective tissue or peritoneum. The cold irrigations are useful, he states, with subinvolution of the puerperal uterus from weakness in the uterine musculature and vessel walls. The temperature in the region is reduced much more than by application of an ice bag outside. In one of the cases reported the gravid uterus had become incarcerated and the cold irrigation was applied twice for half an hour to prepare the uterus for the supposed inevitable operation, but this proved unnecessary, the cold having evidently caused such contraction of the uterine musculature that the organ, thus reduced in size, had spontaneously righted itself.

Münchener medizinische Wochenschrift

April 19, LVII, No. 16, pp. 833-888

132 Experiences with Tuberculin in Diagnosis and Treatment in Pulmonary Tuberculosis. F. Rolly.
133 Influencing of Local Tuberculin Reaction by Acute Febrile Processes. H. Krannhals.
134 Calcium Chlorid Method for Enriching Tubercle Bacillus Cultures. (Neues einfaches Anreicherungsverfahren für Tuberkelbazillen.) A. Zahn.
135 *The Meiostagmin (Drop-Forming) Reaction in Typhoid, Tuberculosis, Echinococcus and Ankylostoma Disease. G. Izar.
136 *Etiology of Carcinoma. A. Theilhaber and S. Greischer.
137 Operative Treatment of Double Thumb. (Zur operativen Behandlung der Daumenschere.) H. Hilgenreiner.
138 Does the Side-Chain Theory Harmonize with Known Facts? (Ist die Ehrlichsche Seitenkettentheorie mit den tatsächlichen Verhältnissen vereinbar?) I. Bang and J. Forssman.
139 The Wassermann Reaction and the General Practitioner. F. Plaut.
140 Treatment of Most Frequent Gastrointestinal Disturbances in Infants. (*Behandlung der häufigsten Magen- und Darmstörungen der Säuglinge.*) H. Dörfler. Commenced in No. 15.

135. **The Meiostagmin Reaction in Typhoid, Etc.**—In this communication Izar gives the details of the application of the test for changes in the drop-forming property of the serum in various diseases, this being the material on which the preliminary report was based, mentioned in The Journal, April 2, 1910, page 1177.

136. ***Nature and Treatment of Carcinoma.***—Theilhaber and Greischer discuss the statistics gathered by F. Theilhaber which showed that carcinoma of the uterus is comparatively infrequent among the rich and among Jewish women, while mammary carcinoma is far more frequent among the unmarried, the rich and Jews. He ascribed this fact to the lesser number of pregnancies, tight lacing and racial peculiarities. Greischer has also found gastric cancer more frequent among the poor and especially frequent among cooks, while rectal cancer is more liable to be encountered in the rich, and most frequently of all in men holding high official positions. As a whole, they state, there are more cases of cancer among the rich, and the disease develops at a later age. Cancer is more frequent among the Jews, they believe, all organs inclusive. The mortality from cancer has doubled at Munich during the last

forty years. Theilhaber ascribes great importance to cicatricial tissue as a factor in the development and especially in the recurrence of cancer. Trauma and cicatrix disturb the metabolism in the mesodermal tissue and this permits encroaching proliferation of ectodermal elements. Normally the mesoderm holds them in check and he suggests that possibly an extract of mesodermal tissue might prove effectual in checking the growth of incipient cancer or preventing recurrence. He adds that possibly in the attempt to remove all morbid tissue the operative trauma has been made unnecessarily extensive. It is certainly suggestive, he remarks, that Schröder had 19 patients radically cured after an interval of 4 years out of 96 who had survived resection of the cervix 30 years ago on account of cancer. This incomplete operation evidently left morbid elements but the organism was able to cope with them. As a logical consequence of his view he suggests the advisability of means to prevent development of cicatricial tissue and to promote normal conditions in the region by artificially inducing hyperemia with application of heat, electricity, stasis and suction devices, wet cupping and, with uterine carcinoma, hot vaginal douches and ingestion of ovarian substance.

Wiener klinische Wochenschrift, Vienna

April 21, XXIII, No. 16, pp. 573-612

141 Röle of the Liver in Resorption of Fat. (Experimentelle Untersuchungen über die Bedeutung der Leber bei der Fettresorption unter normalen und pathologischen Verhältnissen.) G. Joannovics and E. P. Pick.
142 Comparative Serologic Research on Tuberculosis and Syphilis. R. Müller and E. Suess.
143 Nature and Causal Treatment of Exophthalmic Goiter. (Morbus Basedowi.) S. Federn.
144 Relations between Uterine Myoma and Goiter. E. Ullmann.
145 Test for Adrenalin in the Blood. (Ueber Adrenalinämie.) M. Selzer and G. G. Wilenko.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXVI, No. 1, pp. 1-213. Last indexed February 19, p. 661

146 Review of 1,558 Obstetric Cases. (Wochenbetts- und Säuglingsstatistik.) Sanders.
147 *Operation for Total Uterine Prolapse. R. Jolly.
148 *Adenomyoma of the Uterus. M. Yamasaki.
149 Present Status of Theory in Regard to Placental Origin of Eclampsia. F. Schenk.
150 Congenital Displacement of Uterine Mucosa in the Cervix. (Kongenitale Heterotopie der Uterusschleimhaut in das Kollumgewebe. Ein Beitrag zur Lehre der Adenomyome.) A. Labhardt.
151 *Cesarean Section plus Tubal Sterilization. (Drei Fälle von Kaiserschnitt.) M. Flesch.
152 Ovarian Sarcomas and their Complications. A. Wermuth.
153 Nodular Hypertrophy of Fallopian Tubes. (Zur sogenannten Salpingitis isthmica nodosa.) J. Wallart.
154 Bacteriologic Data as Aid in Abdominal Operations for Cancer. (Weche Hinweise geben uns bakteriologische Untersuchungen für die Methodik der Wundversorgung bei abdominalen Gebärmutterkrebsoperationen?) W. Hannes.

147. Operation for Total Prolapse of the Uterus.—Jolly describes with illustrations his technic for operative treatment of total prolapse of the uterus which he has applied in thirty-three cases in Olshausen's gynecologic service at Berlin. The method, he says, is similar to that recently published by Polk, but he operates exclusively by the vaginal route. Two of the patients succumbed to pulmonary embolism, another to diabetic complications. The high mortality from embolism may be due, he thinks, to the injury of the veins in the floor of the pelvis during the posterior colporrhaphy. Pulmonary embolism occurred in 6 out of 500 other operations requiring this colporrhaphy during the last few years in the service while in a preceding series of 634 cases there were only 2 deaths from this cause. Not until the last few years has it been the practice to take the deep suture in the musculature of the floor of the pelvis, and it is a question, he remarks, whether the advantages of this technic outweigh the danger of pulmonary embolism. Simple removal of the prolapsed uterus alone does not protect against recurrence, but with the technic described it seems to be possible to ensure a solid and well-shaped vagina. The ultimate results have been excellent in all the cases in which it has been applied.

148. Adenomyoma of the Uterus.—Yamasaki concludes from the case reported and what he has learned from the literature that total hysterectomy is the only means of certain cure in adenomyoma of the uterus.

151. Cesarean Section.—Flesch protests that the question as to the best technic for Cesarean section is merely that as to the possibility of simultaneously sterilizing the woman so as to prevent further conception. When conditions are so serious as to demand Cesarean section and there is no prospect for future normal deliveries, he combines tubal sterilization with the operation. The question of a supplementary sterilizing operation should be considered in cases of manifest deformity, severe rachitis, osteomalacia and a tendency to placenta prævia, but not for eclampsia, as this affects predominantly primiparæ although serious chronic impairment of the kidneys may afford an argument in its favor in some cases.

Zentralblatt für Chirurgie, Leipsic

April 16, XXXVII, No. 16, pp. 569-600

155 Synthetic Suprarenin. H. Braun.
156 *Plastic Operation after Resection of Shaft of Long Bone. (Ueber Knochenplastik nach Resektionen an langen Röhrenknochen.) W. Bittner.

156. Plastic Operation After Resection of Shaft of Long Bone.—Bittner resected the lower half of the tibia down to the epiphysis on account of sarcoma. The gap thus left was filled with a corresponding piece cut out of the remaining upper half of the same bone. With the wire saw and chisel the tibia was cut in half up into its tuberosity, and the portion thus mobilized was turned over downward, bringing the upper part down to the epiphysis where it was sutured. A wire also held the lapping ends of the bones together in the center. The leg was put in a plaster cast for some time, with which the child, a girl of 13, was allowed to be up and about after the sixth week. The result has been satisfactory; the leg is scarcely 1.5 cm. shorter than its mate and can be normally used. The illustration accompanying the article is stated in a later issue to be incorrect, and a corrected view of the technic is given on page 644.

Zentralblatt für Gynäkologie, Leipsic

April 16, XXXIV, No. 16, pp. 529-560

157 Extraperitoneal Cesarean Section. (Extraperitonealer Kaiserschnitt nach Latzko.) S. Cholmogoroff.
158 Technic for General Anesthesia. (Zur Frage der Narkoseasphyxie.) O. Burckhardt-Socin.
159 *Digital Compression of the Aorta to Control Postpartum Hemorrhage. (Die Digitalkompression der Aorta als blutstillendes Mittel bei Nachgeburtsblutungen.) E. Engelhorn.
160 Proposed Compilation of Data for Protection for Women at Childbirth. (Zur Statistik für Wochenschutz.) A. Buecheler.
161 Improved Forceps for Seizing the Uterus. (Uterushaltezange mit abnehmbaren Griffen.) M. Hirsch.

159. Digital Compression of the Aorta for Postpartum Hemorrhage.—Engelhorn comments on the hard, retracted condition of the uterus when there has been much loss of blood, Nature evidently striving thus to arrest the hemorrhage. The frequency of this explains the great rarity of directly fatal postpartum hemorrhage. Momburg's belt constriction arrests postpartum hemorrhage by the same means, the shutting off of the blood supply starting vigorous retraction in the uterus. He is convinced that the same effect can be realized by systematic compression of the aorta with the fingers, pressing it back against the spine until the femoral pulse ceases to be perceptible. In two normal cases in which this compression was applied for 150 pulse beats, the uterus contracted vigorously and the placenta was early expelled. This also occurred in a case in which extreme atony had been the rule in three previous pregnancies with threatening hemorrhage each time. Immediately after the birth of the child the aorta was compressed in this way for 150 beats and the uterus contracted normally. At any sign of relaxation the compression was applied anew for a minute or so. Each time the uterus responded with a contraction and there was no abnormal hemorrhage. Similarly good results were obtained in another case in which part of the placenta had to be removed by hand. Engelhorn adds that to Momburg belongs the credit of calling attention anew to the advantages of this simple method of controlling uterine hemorrhage and the means of control by the femoral pulse becoming imperceptible.

Zentralblatt für innere Medizin, Leipsic

April 16, XXXI, No. 16, pp. 393-416

162 *Etiology of Glycosuria. (Zur Aetiologie der Glykurie.) F. Rosenberger.

162. Glycosuria of Nervous Origin.—Rosenberger reports a case in which diabetes developed after a severe nervous strain.

and also a case in which periods of excitement or worry were always followed by transient glycosuria.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 17, XXXI, No. 46, pp. 481-496

163 Recent Italian Research on Smallpox and Vaccine. (Le recenti osservazioni Italiane sul vaiolo e sul vaccino.) E. Bertarelli.

164 Hernia not an Industrial Accident but an Industrial Disease. (Il concetto dell' ernia quale infortunio sul lavoro non ha il suffragio anatomico.) F. Bindi.

April 19, No. 47, pp. 497-504

165 Petroleum and Benzin for Surgical Sterilization of the Skin. C. Zatti.

April 21, No. 48, pp. 505-512

166 Morphologic and Cultural Characteristics of the Parasite of Infantile Splenic Anemia. (Sui caratteri morfologici e culturali del parassita del anemia splenica infantile.) G. Di Cristina and S. Cannata.

April 24, No. 49, pp. 513-528

167 *Gynecologic Expert Testimony in Murder Case. (Una perizia ginecologica.) L. M. Bossi.

168 Occult Blood in Stools with Trichocephalus. (A proposito della "reazione di Weber e tricocefalo." M. V. Carletti.

167. **Gynecologic Expert Testimony in Murder Case.**—Bossi gives the bases for his testimony in a recent murder case at Venice in which for the first time a gynecologist was called on for his specialist opinion. The accused was a Russian woman with a history of insanity in the family, married at 16, the menses always irregular and painful. She had been left with chronic inflammation in the adnexa after her second pregnancy ten years before; the uterus was three times the normal size and bound down in retroflexion, interfering with the bladder and intestine functioning, and thus entailing more or less stagnation of the intestinal content and of the urine and of the secretions in the abnormally flexed uterus. He testified that the resulting persisting autointoxication must have had an injurious effect on the material and psychic functioning of the nervous system.

Policlinico, Rome

April 24, XVII, No. 17, pp. 515-546

169 *Shortened Technic for Exclusion of the Pylorus. (Nuovo metodo per l'esclusione del piloro.) G. Parlavecchio.

170 Dire Results of Trusting to Asepsis Alone in Home Deliveries. (La teoria della sola asepsi nell'assistenza al parto e le sue conseguenze.) L. M. Bossi.

April, Medical Section, No. 4, pp. 145-192

171 *Treatment of Infectious Nephritis. U. Arcangeli.

172 Metabolism of Lime, Magnesium and Phosphoric Acid in the Healthy and in the Gouty. (Il ricambio del calcio, del magnesio e dell'acido fosforico nell'uomo sano e nel gottoso.) P. Ciuffini.

173 The Mechanism of Gallop Rhythm. (Sul meccanismo del ritmo di galoppo.) C. Pezzi.

169. **Shortened Technic for Exclusion of the Pylorus.**—Parlavecchio comments on the advantages of exclusion of the pylorus under certain conditions but states that the operation is so long and tedious that many shrink from it on this account when otherwise it might be indicated. He now proposes a simpler method than the von Eiselsberg technic hitherto generally used. On dogs it required only from 2 to 4 minutes longer than a simple gastroenterostomy. Instead of cutting off the pylorus from the rest of the stomach he merely throws a ligature around it at the point where the incision would be made by the usual technic, thus shutting off the region of the pylorus as completely as if it had been resected. He uses a strong, non-elastic ligature and proliferation of cicatricial tissue soon completely shuts off the part beyond.

171. **Treatment of Infectious Nephritis.**—Arcangeli analyzes his experiences with nephritis at the Rome policlinic, his conclusions being that the specific drug indicated should be used without paying too much attention to the influence it may have on kidney functioning; especially in syphilitics it is hard to know whether the nephritis is of syphilitic nature or not. With negative Wassermann findings, he advises against mercurial treatment. Diphtheria antitoxin is useful, he states, in the nephritis that accompanies diphtheria. In streptococcus or staphylococcus nephritis he advises vaccines used according to Wright's technic; this may also prove useful in nephritis from the diplococcus, etc. In acute nephritis with fever his experience warns against the use of drugs to reduce the fever and also of heat to induce sweating, but the fever should not be left untreated, and for this he advises cold hydrotherapy, graduated to the intensity of the fever.

Ugeskrift for Læger, Copenhagen

April 14, LXXII, No. 15, pp. 417-452

174 *Successful Operative Treatment of Megacolon. (Et Tilfælde af Hirschsprung's Sygdom, behandlet med Tarmresektion.) J. Schou.

174. **Successful Operative Treatment of Megacolon.**—Schou's patient was a boy of 14 who had had intestinal disturbances from early childhood. They finally became so serious that his abdomen became enlarged to measure 106 cm. while the rest of the body was much emaciated. The enlarged segment of the colon included the flexure, the descending and part of the transverse colon, all of which were removed, the segment measuring 90 cm., nearly a yard, in length and as large around as a man's thigh. The child has developed normally since the operation and has a daily movement of the bowels unaided.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Appleton's New Practical Cyclopedia. Edited by Marcus Benjamin, Ph.D., Editor of the United States National Museum, Washington, D. C., assisted by Arthur E. Bostwick, Librarian of the St. Louis Public Library; Gerald Van Casteel, Chief of Editorial Staff; George J. Hagar, Expert Compiler and Statistician, with an Introduction by Elmer E. Brown, Ph.D., United States Commissioner of Education. In Six Volumes. Cloth. Price, $18 the set. Pp. 3000 (about). New York: D. Appleton & Co., 1910.

The Production and Handling of Clean Milk. *Including Practical Milk Inspection.* By Kenelm Winslow, M.D., M.D.V., B.A.S. (Harv.), Chairman of the Committee on Milk of the Washington State Medical Association. And Essentials of Milk Bacteriology. By H. W. Hill, M.D., Minnesota State Board of Health Laboratories. Cloth. Price, $3.25. Pp. 367, with 101 illustrations. New York: W. R. Jenkins C., 1910.

Die Indikationen zu chirurgischen Eingriffen bei inneren Erkrankungen. Für den Praktiker bearbeitet von Dr. Hermann Schlesinger, k.k. Primar-Arzt im k.k. Allgemeinen Krankenhause in Wien. Mit einem Anhange von Dr. Julius Schnitzler, k.k. Primar-Arzt im k.k. Krankenhause Wieden in Wien. Paper. Price, 12 marks. Second Edition. Pp. 614. Jena: Gustav Fischer, 1910.

The Harmful Effects of Acetanilid, Antipyrin and Phenacetin. U. S. Department of Agriculture, Bureau of Chemistry, Bulletin No. 126. By L. F. Kebler, M.D., *Chief, Division of Drugs,* with the Collaboration of Drs. F. P. Morgan and Philip Rupp, Assistant Chemists. Paper. Pp. 85. Washington: Government *Printing* Office, 1909.

Die spinale Kinderlähmung. Eine klinische und epidemiologische Studie. Von Dr. Eduard Müller, Direktor der Medizinischen Universitäts-Poliklinik in Marburg, mit Unterstützung von Dr. med. M. Windmüller, Assistenzärztin der Poliklinik. Paper. Price, 6 marks. *Pp. 170, with 21 illustrations. Berlin: J. Springer, 1910.*

Harmfulness of Headache Mixtures. By L. F. Kebler, M.D., Chief, Division of Drugs, Bureau of Chemistry, and Drs. F. P. Morgan and Philip Rupp, Assistant Chemists. U. S. Department of Agriculture. Farmers' *Bulletin* 377. *Paper. Pp.* 16. Washington: [Superintendent of Documents] Government Printing Office, 1909.

Habit-Forming Agents: Their Indiscriminate Sale and Use a Menace to the Public Welfare. By L. F. Kebler, Chief, Division of Drugs, Bureau of Chemistry. U. S. Department of Agriculture. Farmers' Bulletin 393. Paper. Pp. 19, with 5 illustrations. Washington: Government *Printing Office*, 1910.

Medical Electricity and Röentgen Rays. With Chapters on Phototherapy and Radium. By Sinclair Tousey, M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Cloth. Price, $7 net. Pp. 1116, with 750 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Annual Report of the Bureau of Health for the Philippine Islands. By Victor G. Heiser, M.D., Director of Health, Passed Assistant Surgeon, United *States Public* Health and Marine-Hospital Service. July 1, 1908, to June 30, 1909. Paper. Pp. 193, with illustrations.

Proceedings of the Ninth Annual Conference of Sanitary Officers of the State of New York. Held at Convention Hall, Rochester, Nov. 10-12, 1909. Paper. Pp. 296. Albany: New York State Department *of* Health, Division of Publicity and Education.

The Pathology of the Living and Other Essays. By B. G. A. Moynihan, M.S. (Lond.), Honorary Surgeon to Leeds General Infirmary. Cloth. Price, $2 net. *Pp.* 260. Philadelphia: W. B. Saunders Co., 1910.

Sixteenth Annual Report of the Managers and Officers of the Craig Colony for Epileptics, Sonyea, Livingston County, N. Y. Transmitted *to* the Legislature Jan. 5, 1910. Paper. Pp. 143.

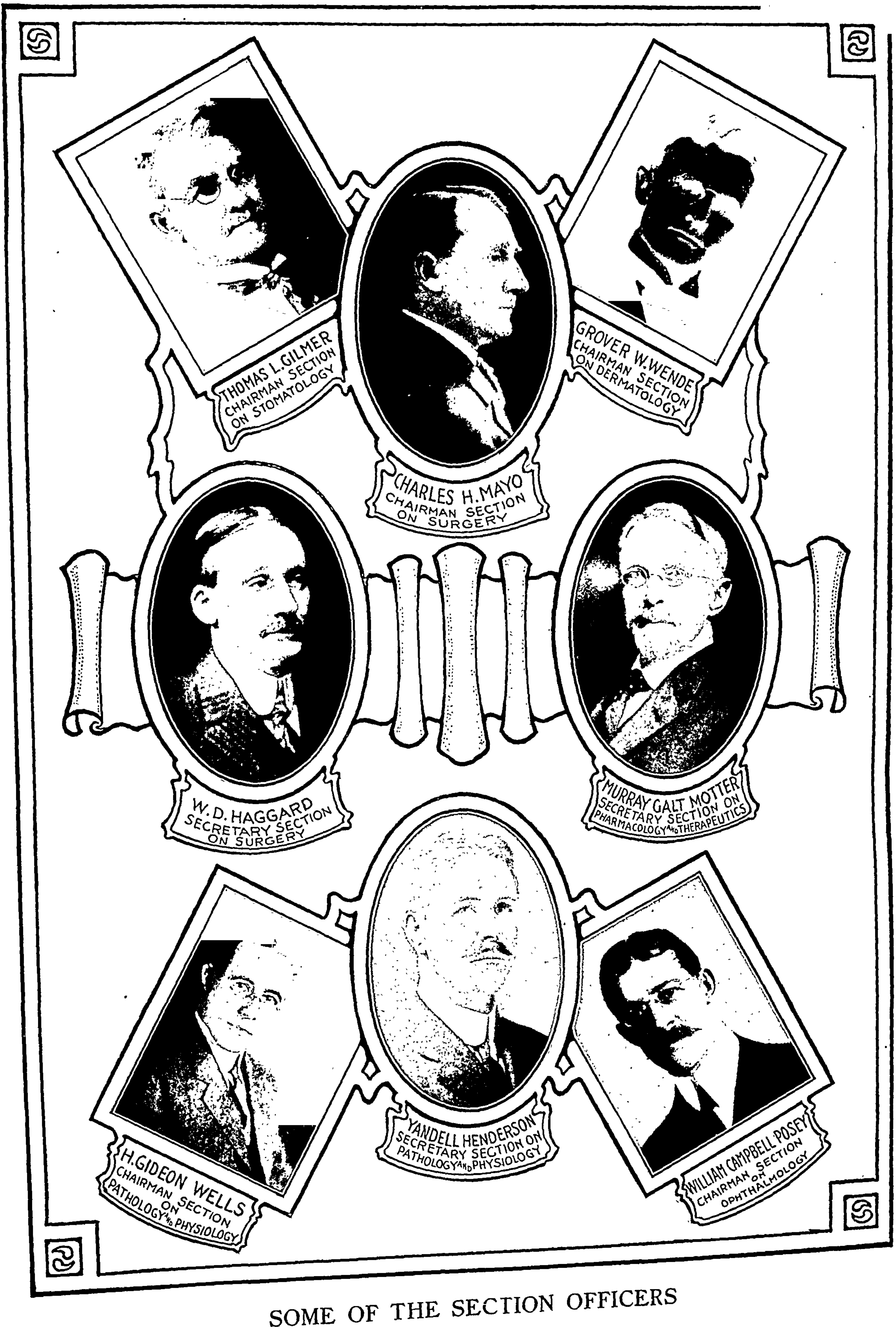
Thirty-second Annual Report of the Department of Public Health, Augusta, Ga., 1910. For the Fiscal Year Ending Nov. 30, 1909. Paper. Pp. 85.

Fourteenth Annual Report of the State Medical Board, State of Ohio. For the Year Ending Dec. 31, 1909. Paper. Pp. 68.

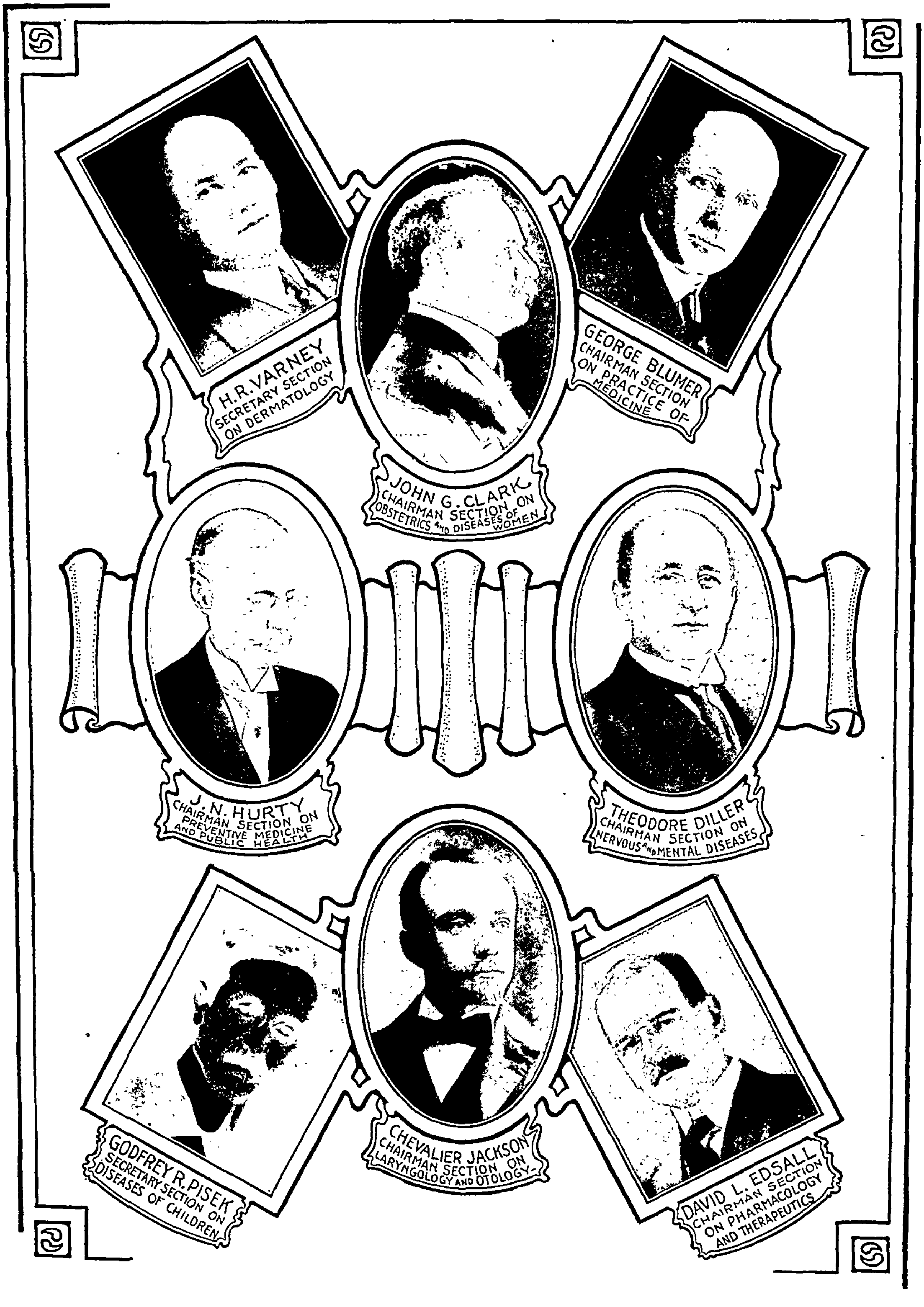
Annual Report of the Health Department of the City of Richmond, Va. For the Year Ending Dec. 31, 1909 Paper. Pp. 110.

William H. Welch,

PRESIDENT AMERICAN MEDICAL ASSOCIATION, 1910-1911.



SOME OF THE SECTION OFFICERS



SOME OF THE SECTION OFFICERS

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Address

SOME PUBLIC HEALTH PROBLEMS*

G. MILTON LINTHICUM, A.B., A.M., M.D.
Professor of Physiology and Proctology, Baltimore Medical College
BALTIMORE

In view of the present active crusade for increased efficiency in all lines, I feel it pardonable to bring to your attention at this time some matters pertaining to health. Not that I can add to your knowledge of the subject, but only by frequent iteration is it possible to impress on the public mind the importance of these questions. General information is only of slight value, beyond adding to our self-complacency, and deluding ourselves as to what we really know. It is only when we analyze our information that we learn how vague our ideas are.

Hence my plea for indulging in a somewhat frayed-out topic is, that in reviewing the literature of our state and national health conditions, one is struck with two great truths: first, how enormous has been the success in dealing with many dread diseases, such as smallpox, plague, typhoid fever, cholera and yellow fever, all of which has been made possible by scientific investigation and data obtained largely through the labors and sacrifices of our profession; second, with the great fields yet to be cleared which are growing up daily from the seed sown by the previous crop of tares, and that these huge problems of health, state and national, are to be solved, I feel, largely by the medical profession, the biologist and the biologic engineer; and the latter must in course of his preparation pass through a medical training to understand his work.

To these achievements of the past I shall refer briefly in order that the possibilities of the future may be forecasted.

SMALLPOX

The marvelous results of vaccination are incomprehensible to present-day physicians. I have seen but three cases of smallpox in sixteen years of practice, and the patients were in quarantine. Before Jenner's discovery, slightly more than a century ago, the toll demanded from the human family was one-tenth of the deaths from all causes. During the eighteenth century it is computed that at least 50,000,000 persons died of this one disease. Prior to compulsory vaccination in Prussia in 1874, it having been used intermittently up to that time, the death-rate was 24.4 per hundred thousand; during the next decade it fell to 1.5 per hundred thousand.

As early as 1826 Denmark had compulsory vaccination, and has enforced it so vigorously that not a case has occurred in ten years. Havana for eight years prior to its occupancy by the Americans reported 3,123 deaths from smallpox. In 1899, a year after our entry, there were four deaths and only three in the next seven years, a practical elimination of a scourge which had always existed prior to this time. This illustrates two factors—the entire prevention of a disease by a scientific immunizing agent, and the need of such laws as will protect the whole people, though this to some appears as a sacrifice of individual rights.

This plea for personal liberty, arising in the Old World, has invaded our land, and groups of obsessed and hysterical individuals have formed a society for attacking vaccination. These people band themselves together under the head of antivaccination societies, and by specious arguments endeavor to influence the uninformed as to the possibilities of disease being inoculated into them by vaccination. It remains for us then, to enlighten the people at large relative to the facts concerning vaccination, that their misleading arguments may be forestalled.

The freedom from smallpox which has been brought about only through vaccination is being used as an argument for legislation against the very agent which has made the controversy possible.

YELLOW FEVER

Yellow fever in 1793, during a period of six and a half weeks killed one-tenth of the entire population of Philadelphia. Since that date approximately 500,000 cases have occurred in the United States, one-fifth of which terminated fatally. In 1900 experimenting by Lazear and Carroll Reed on themselves—having a certain species of mosquito (*Stegomyia*) inoculate them—confirmed the work of previous and coincident workers as to the true carrying agent of this malady, but sacrificed their noble lives that the world might be informed and many lives saved. So to-day as a result of this sacrifice, our country is practically free from this disease.

Havana has paralleled the elimination of its smallpox by reducing its cases of yellow fever from a death-rate of 639 to 100,000 people in 1896 to 4.3 to 100,000 two years later. These results have been due to protection from the mosquito and the general cleaning up and enforcing of the sanitary measures by General Wood and Colonel Gorgas.

Panama, under Colonel Gorgas, has been changed by sanitary means from a region fatal to life by virtue of disease into one as free of disease as the average country. Indeed, it may truly be said that sanitary science is building the Panama Canal, that its completion will be the most enduring monument to preventive medicine; and as the two great oceans commingle their waters, and as the world gazes on the majestic ships as they pass to and fro, it will perhaps be realized that the power of man is supreme over inanimate matter. This will give to all mankind the true faith and belief that the knowledge of sanitary engineering will increase, so that as the Panama Canal represents the completion of an undertaking of vast proportions, so will the causes of diseases be eventually circumvented.

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* President's Address to the Members of the Medical and Chirurgical Faculty of the State of Maryland Annual Meeting, April 26, 1910.

CHOLERA, SCURVY, TYPHUS AND DIPHTHERIA

Cholera, formerly the scourge of the Atlantic seaboard, is now, since the discovery of its cause, practically a thing of the past.

Scurvy, which in the eighteenth century decimated the armies and navies of Europe, has been eliminated by the discovery of its cause, which was proved to be faulty nutritive and metabolic processes dependent on the deficiency of vegetable juices.

Typhus fever, popularly known as ship fever, jail fever, a scourge which ravaged the civilized world for centuries, is so rare now that I question if there is a practitioner in this audience who has seen a case in his whole experience. A disease of filth, overcrowding and lack of sanitation, its elimination has required only cleanliness, light and air.

Diphtheria, the very name of which brought terror to the heart of the mother and blanched the cheek of the father, has been robbed of its fangs, the mortality having been reduced from more than 40 per cent. to as low as 4 in cases recognized early.

LABORATORY INVESTIGATION

Here improved sanitation has not availed in its arrest, but the laboratory has brought about a curative serum, to which method alone we must give full credit for relief from this dread disease. I can do no better than to quote the closing remarks of a paper read by Dr. William H. Welch in 1895, for it emphasizes two factors so well; the value of laboratory methods, and animal experimentation:

> The discovery of the healing serum is entirely the result of laboratory work. It is the outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem. These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose *philozoic sentiments outweigh sentiments of true philanthropy*, that these discoveries which have led to the saving of untold thousands of human lives, have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been without experimentation on animals.

Indeed, with the vast amount of material facts already collected, and with the results thus far obtained, the retrospect is assuring for the future.

The health problems present two phases which should be considered, as they are of equal importance, from both an economic and a humanitarian view-point. The improvement in our vital resources will result in increasing the span of life as well as decreasing disease during life, thereby prolonging the period of productiveness, and at the same time adding proportionately to the well days during life, in the same ratio as disease is lessened. Thus, as it has been said, we add to the breadth as well as to the length of life.

SANITARY SCIENCE AND PREVENTIVE MEDICINE

If one compares countries where sanitary science and preventive medicine have sway with those not so regulated, the results are astounding. In India the average lifetime is less than twenty-five years. In this country it is forty-four years, taking Massachusetts as a criterion, this being the only state with a long accurate vital statistical record. The increase from century to century shows the marked effect of sanitation. India remains stationary. In Europe the average lifetime has doubled in three and a half centuries. The increase was approximately four years per century during the seventeenth and eighteenth centuries, while the first half of the nineteenth century showed an increase of about nine years, and the latter at least seventeen years.

Germany, the country of advanced sanitation and prevention, shows an increase of about twenty-seven years in a century. In this country, Massachusetts as a basis, the increase is only about half that of Germany.

When we compare the average lifetime in India with that in Sweden, and find it only half; and when we further compare all the intermediate statistics of various countries, we find that *the length of life is directly proportional to development of sanitation.* The conclusion is obvious, that the length of the human life can be prolonged or shortened by a change of those conditions on which it directly depends.

It is estimated that in the United States at least 3,000,000 persons are seriously ill all the time. Of this number one-sixth or 500,000 are sick of tuberculosis, of whom 150,000 die annually. *It is believed that at least three-quarters of this number could be saved by preventive measures.* The death-rate from tuberculosis in England is now only one-third of what it was seventy years ago.

This gradual decrease of deaths from tuberculosis, giving England a lower rate for this cause than any other country, is explained by *Dr. R. W. Phillips of Edinburgh.* He states that:

> The legislation of the past three-quarters of a century with regard to the dwellings of the poor, lodging-houses, work-shops and factories, and other public health enactments, have paved the way for the more direct attack. Through the influence of these measures mortality from tuberculous diseases has as *steadily lessened as that from other infectious conditions.* There can be no doubt that the housing question, using that phrase to include all considerations relating to dwellings, lodging-houses, schools, factories, etc., must occupy a chief place in the preventive program against tuberculosis.

This phase of the subject is one which needs more attention, particularly in this and other southern states where tuberculosis is so prevalent and so fatal in the negro race. When we realize that a large majority of people, estimated at 90 per cent., are all, at one time or another, affected with tuberculosis, and that but 10 per cent. die, enormous as this makes the grand total, we are justified in saying that in few diseases not self-limited is there a greater tendency to recovery than in tuberculosis. This one problem must be solved by a full realization on the part of those in legislative power of the possibility of prevention, by the enactment of suitable regulations, and appropriations of sufficient funds to properly enforce them. I feel that Maryland has been no laggard in this fight, and that its work will show remarkable results in another decade.

PROTECTING WATER-SUPPLY

Typhoid fever exists throughout the United States to an enormous extent, the most of which has been directly attributed to the water-supply. Aside from the great financial loss and distress of mind in the care of cases of typhoid recovering, it causes 2 per cent. of all deaths, and it is generally conceded that Hazen's theory is correct, that every life saved from typhoid by better water-supplies, means two or three lives saved from other causes. The improvement of the water-supply of various cities has enormously reduced the occurrence of cases.

But there is a feature of the disease which we, as physicians should not lose sight of. It is to-day largely a rural disease, because of the proximity of wells to habitations; and the well in which hung the old oaken bucket has been the cause of many of the sad scenes of our childhood. The purification of these sources of water-supply cannot be attained by measures in rural districts corresponding to those employed in large cities, such as expensive filtration plants.

This condition can and should be met by the physician, first of all he should recognize the disease; and this in most instances may be more readily done by the improved methods of diagnosis. Secondly, he should realize that the disinfection of feces and urine will destroy the possible contamination of the drinking-water. Thirdly, he should make sure of protection from the "typhoid fly" carrying the germ from patient to food and drink. Finally, the usual sick-room precautions should be observed. Thus can we as physicians be the greatest factors in this fight. When we destroy the source of contamination, all water-supplies will remain pure.

I do not deprecate the necessity for modern sanitary water-supplies for large centers; they are of vast importance; but suitable precautions taken will reduce this disease to a minimum, even under the present arrangement.

We know that typhoid is a water-borne disease. The pollution of interstate waterways is the cause of a tremendous loss of life, and it is a problem which has led to the question of the power of the government to eliminate this evil without interference with state rights. Without exhaustively discussing this legal constitutional question, I may only quote without giving details, an opinion given by ex-Congressman George Shiras, son of Justice Shiras, to Surgeon General Wyman:

> The right of a government to regulate and control the extent and character of water pollution is a primary one and may, in the United States, be divided into two general classes: First, local waters, or those lying wholly within the confines of a single state. Second, interstate waters, or those traversing or lying within the territory of two or more states. In the first division, the sanitary jurisdiction over local waters is limited to the state courts, and all remedial or corrective legislation is vested solely in the law making body of the state. In the second division, however, the jurisdiction over the interstate waters may be a concurrent one of the state and federal governments, or at times, when the conflicting interests of the state in such common waters requires the intervention of a final arbitrator, the federal government becomes supreme in its determination of what constitutes an unreasonable and unnecessary pollution of waters common to two or more states. Thus it simply remains for the people to realize this danger and demand the proper protection.

The pollution of water-supplies from sewage is becoming daily a more and more serious problem. With the extension of rapid and convenient transportation, the suburban sections are becoming crowded; cities as dwelling-places are no longer appreciated; the tendency is to go to the country. In consequence of this there are many communities located along streams furnishing drinking-water to other communities, where no adequate provision is made for the disposal of the sewage, resulting in a constant saturation of the soil and pollution of streams. There must be some way of solving this problem. Health ordinances must be enacted for the suburbs as stringent as those for the city, if a serious condition of affairs is to be prevented. The pollution of streams within the state must be prevented by state authorities, and it is regrettable that it often seems difficult to enforce such measures. The people have the power in their hands. Public sentiment must be aroused.

PNEUMONIA

The number of deaths from pneumonia is somewhat greater than that from tuberculosis. This disease causes 11 per cent. of all deaths in the United States, as shown from the mortality statistics of the registration area by the last census. Our knowledge of it is confined to its cause, its communicability and the wide distribution of its germs. The predisposing causes have been observed to be those things which lower the vital resistance, such as alcoholism, acute or chronic, exhaustion, exposure, and insufficient clothing or food. The means of its prevention by health measures, other than maintaining a high condition of vitality, are not known. It is therefore, a formidable problem for the laboratory man to solve as he has solved that of diphtheria.

MALARIA

Malaria is preventable and is decreasing rapidly throughout the country. It can be absolutely eliminated in one of three ways: first, by eliminating the parasite from the blood by quinin or other therapeutic measures; second, by preventing the mosquito from biting a malarial patient and becoming inoculated, or by preventing the mosquito which has become inoculated from biting the non-inoculated person; third, by destroying all mosquitos by sanitary measures. I believe the first method, by the unstinted use of quinin, has thus far been the chief factor in the reduction of malaria, and I believe the cheapening of quinin to make it available was one of the greatest economic blessings the American people has ever had. Malaria is not a disease with a high mortality, but wherever and whenever it prevailed, the country or state of the country was markedly backward in its development. It is said the decline of the Roman Empire dated from the time the people discontinued the custom of anointing their bodies with olive-oil, thereby permitting the mosquito to bite and inoculate them with malaria, for a mosquito declines to bite through a film of oil.

While I am sure that everyone feels that malaria was only one of the many factors in the decadence of those wonderful seats of civilization, and that social degeneracy was really the beginning, perhaps this led to neglect of many sanitary measures, of which this was one. Malaria, while not of a high death-rate, is doubtless responsible for many of the disabilities of the South where its elimination has been neglected. Dr. L. O. Howard has estimated that there are annually 3,000,000 cases in the United States, most of which are in the South, practically all of which are preventable.

PLAGUE

In plague we have a disease which has for centuries baffled sanitarians in their efforts to prevent its occurrence and spread. It was formerly believed to be communicated through the air and by the agency of fomites. The line of attack has been in the way of disinfection, with very inadequate results. It has been observed for many years that coincident with epidemics of plague, there was noticed a great mortality among the rats from an epizootic attack, and in 1894 Yerzin discovered that the *Bacillus pestis* was the cause of the attacks, and that the plague in man and rats was identical. By further investigation it was shown by Simonds in 1897 that the rat flea was the responsible transmitter of the disease. It is now generally admitted that the disease is primary in rats, and secondary in man, and by a process of elimination, the flea has been fixed as the intermediary. Then, as Dr. Richard H. Creel, who did so much work in San Francisco during the recent epidemic, says, the elimination of the rat is the only satisfactory method of getting rid of this disease.

It is well worth while to destroy all fleas possible, yet if those infesting the rat population escape, the effort will have had little effect in preventing the spread of plague. Major Morehead states that effort at rat destruction, (referring to such measures as trapping and poisoning, when those methods alone are used) is of doubtful value. The most efficient means thus far for the eradication has been that adopted by the Marine Hospital Service—building the rats out of homes; constructing in such way as to leave no nesting-places, keeping their number down by depriving them of food and breeding-places. The various experiments of developing a destructive micro-organism, or poisoning or trapping, have all been found inadequate.

THE RAT

The rat is a recognized carrier of a number of diseases. He is subject to leprosy, cancer, trichinosis, plague and other serious maladies. Rats are of absolutely no value and are now recognized by the whole world as a menace to health and as carriers of disease, not only from one community to another, but from one country to another, as they are noted travelers, especially by vessels. From their great propensity to travel, the rat, from his native home in China, has over run the entire world. To-day a serious problem is the elimination of the rat both as an economic, as well as a health measure.

HOOKWORM

The hookworm disease in the south has been investigated by Dr. Charles W. Stiles of the public Health and Marine-Hospital Service. Hookworm disease incapacitates for about one-quarter of the time; it is popularly called "the lazy disease," and is responsible for the so-called "poor white trash" of the South. It is curable by suitable drug treatment, and its elimination from the South will be of incalculable benefit.

MENTAL DISEASES

Mental diseases are on the increase, judging from the data of Dr. C. L. Dana of New York, who sees, during the past twenty-five years, an increase from one case in 450 persons to one in 300, a ratio which seems to be about the same in North America as in Europe, where similar conditions prevail. This increase is doubtless due largely to the increase of alcoholic and drug habits and syphilis. It is estimated by Sanborn that the number of insane in the United States exceeds 250,000.

These diseases alone need a method of prevention, for it is recognized that nine-tenths of the inmates of institutions are incurable.

The line of attack must be against the predominant causative agent, heredity, alcohol, syphilis and environment. More enlightment of the profession as to early symptoms and a better knowledge by the laity will add to the possibilities of prevention by early methods of treatment. The elimination of the procreation of the insane, the criminal, the idiotic, is a timely subject. Such methods have already been adopted in Indiana, Connecticut and Michigan. Indiana has gone even to the extent of prohibiting the marriage of all persons suffering from any transmissible disease. This subject should be taken up by our Faculty and its possibilities and feasibilities thrashed out, before the next general assembly. We are fortunate in having a phase of it presented to-night by Dr. Barker as a preliminary to its future study. With the consent of the faculty I shall appoint a special committee to give serious consideration for our future endorsement or rejection to vasectomy in its relation to eugenics.

DRUG HABITS

Closely associated with this doubtless one of the most serious medical problems of modern times is that of drug habits, which are far more prevalent in a variety of forms, than is usually realized. The commonest form of intoxication is alcoholic. This problem has been attacked largely along moral lines, and perhaps much good has been done, yet it seems to be one that should be approached from the medical side, and by educational methods as well.

The popular impression as to the harmlessness of alcohol in moderate quantities is erroneous. It is shown by scientists that the white corpuscles, the natural defenders, are weakened by its use. The alcoholic is more susceptible to the infectious diseases, because of a lowered resistance. There is hardly a disease to which it is not a contributory factor, nephritis, arteriosclerosis, cirrhosis of the liver and many others, besides all the possibilities of transmission to the offspring of various insanities and mental afflictions. From an economic view, alcoholism was found, on investigation by Prof. Henry W. Farman of Yale University, to be responsible for 25 per cent. of all cases of poverty coming under the eyes of the charity organizations, and 37 per cent. of all cases in alms houses. It was directly responsible for 31 per cent. of the criminals, and indirectly of 50 per cent.

The Massachusetts Bureau of Statistics in 1895 indicated that 84.41 per cent. of crime, 48 per cent. of pauperism and 35 per cent. of insanity were the results of alcoholism.

VENEREAL DISEASES

The effort on the part of societies for moral prophylaxis to reduce venereal diseases is meeting with a degree of success in the education of the young people, and will doubtless prove of enormous value in the reduction of the incidence of such diseases. And while we know full well that continence is compatible with health, yet we all realize that continence is not as generally practiced as might be hoped. The question has presented itself, is it not better to recognize this fact, in this fight against the black plague and to teach a method of prevention although it may appear as condoning an unlawful act.

From these few facts I have endeavored to show that there has been a gradual increase in longevity. From the knowledge of past achievements it is fair to assume that, with the possibility of medical discoveries, the number of diseases which will be added to the preventable list will certainly increase.

Such diseases as cancer, nephritis and diabetes, are increasing, and the real causative factors are not recognized. The problems are yet to be solved. Cancer, regarded as a fatal disease of unknown origin, is now engaging the attention of medical scientists, and while the facts thus far gathered are very vague and indefinite, yet with the great minds of the scientific world centered on it, the secrets of its cause must ultimately be ascertained.

GENERAL HEALTH PROBLEMS

The great problem of the future is the betterment of health by the education of the whole people as to its possibilities, teaching them the simple laws regarding food, drink, air and sleep. Our knowledge to-day is sufficient in itself, if it were employed, to increase human life at least fifteen years. Simply enacting laws will, in itself, be of little or no value, but such laws enacted and their value demonstrated to the people at large, preferably before their passage, will be beneficial just in proportion in which they are intelligently comprehended. The ideal time for teaching preventive medicine is in childhood; every school should provide some instruction along this line. The impressions of childhood are the effective, lasting ones.

The problems of health are not given great consideration by the usual adult. If he is an alcoholic, and has lived three-score years, this is attributed to the morning drink; if he were a smoker, tobacco has preserved him; if he were an abstainer, it is because of his abstemiousness. No one attributes it to a high degree of vitality; and here is the real problem in the fight against the usual diseases which decrease the breadth, and at the same time, while not in themselves fatal, lessen the length of life. The real problem, then, is to build up a constitution by prevention of diseases which we know to be preventable by sanitary means; to increase the efficiency of every individual by increasing his vital resistance, thereby establishing a bulwark against the inroads of many troubles which follow a depleted or lowered standard.

Another line of attack in the preventive measures should be an endeavor to prevent many diseases which lower the vitality, produce suffering and render soil suitable for the more serious maladies. Particularly is this true of influenza, and doubtless many of the nonfatal cases of infectious diseases in early childhood, which develop later into tuberculosis, nephritis or some other highly fatal disease.

PHYSICIAN AS AN ADVISER

Why should not the physician bear the relation of an adviser in health? Would it not be a wise and economical move on the part of the public to have an inspection of their vital resources at regular intervals, as they do of their physical resources? Is it not customary in mechanics to have a close watch kept over the machinery to prevent accidents and to maintain them in a high standard of efficiency? I believe that many diseases orginate in early childhood, causing much suffering in after-life, which could be arrested by such examination. The insidious attacks of many diseases of adult life, such as nephritis, diabetes and others, would be disclosed and suitable early treatment instituted, so as to prevent their extension. How often we are consulted about tuberculosis too late to be of much service, while an early examination would have discovered it in its incipiency.

How hopeless is cancer unless there is early recourse to operation! Examinations should be regularly made, often in early and late life, not so frequently in middle life. They should be suitably compensated for, and the physician in return should give a close study to diets, clothing and exercise, that each might be suitably individualized.

LEGISLATION

Along the line of health measures, which through the efforts of this state medical organization have become laws, I can make brief allusion to only a few. I would, indeed, be derelict in my duty were I not here to publicly congratulate the members of the General Assembly on their attitude on the health measures submitted to them for their consideration. The law-makers have realized that the public health is one of the most important assets of the state, and they have been guided by the views of the profession.

The presence of members of our profession on both sides of the house was of inestimable good in the cause of health, because of their ability to give lucid explanations to the lay members, and the profound confidence which their professional standing engendered.

The committees of this faculty on health legislation were indefatigable, and to them we owe a debt of gratitude for their untiring efforts.

The passage of the pure food law, drafted by the governor's commission, of which I was the chairman, was satisfactory to our faculty as represented by the committee. This law embraces every feature provided for in the faculty law to a most satisfactory bill, in that it includes a special proviso for standardizing disinfectants.

The passage of the bill for the state care of the insane places Maryland in the front rank of humanity, and corrects a condition which has been a discredit to the spirit of progress for which Maryland is noted. The measure will not only care for those who are incurably ill mentally, but will be the means of curing many early cases through supervision under trained specialists.

The enactment of the bills for the reorganization of the State Board of Health will systematize its work into bureaus, and thereby enable a closer watch to be kept on all the measures which protect the health of the people. Its appropriations will enable the bureaus to appoint specialists to watch over the departments, the water-supplies, sewerage, milk-supplies, and tuberculosis.

The passage of the midwifery bill as prepared by the committee, will be a great gain in the protection of mothers from incompetent and unintelligent women practicing midwifery. It will at the same time be the means of reducing enormously the percentage of blindness, for it has been demonstrated that nearly one-fourth of the cases in the Maryland blind schools have been in children delivered by midwives. The law was opposed by some who perhaps believed it impracticable, and for a time its fate was in the balance, when it reached the governor. His signature was secured only after the assurance of its practicability and value.

It, however, has brought it up squarely before the faculty, where they must endeavor to provide a way for its effective administration. We have now a law excellent in every detail; it demands that applicants to practice midwifery shall, to a degree, be instructed. At the present time we have no place for their instruction. The future committee on midwifery should endeavor to secure the cooperation of all hospitals with attached maternities, in order that such a course of instruction can be given. The Society for the Prevention of Blindness is fully alive to this immediate need, and will conjointly work with our faculty in this crusade against ignorance and disease.

With such results obtained by our faculty in its endeavor to secure legislation for the good of the people, demonstrating that we have secured the confidence of the law-makers, it only remains for us to continue our campaign of education in matters of health, and to demonstrate our knowledge of disease and that will enable us to secure all the legislation needed for the future.

At the present time we must realize that measures which are inimical to the progress and dignity of the profession are often times introduced for mercenary purposes, as in the recent optometry bill, or through the efforts of the misguided or neurotic, as in the antivaccination bill, both of which measures were defeated.

ANIMAL EXPERIMENTATION

Such legislative efforts should remind us that it is incumbent on us to fully enlighten the public as to the true significance of vivisection, as there is a wave of opposition to its practice, sweeping over the country, fostered by deluded and misguided individuals, with their hysterical attacks of falsehood and calumny. Their grotesque and misleading exhibits all tend so to arouse the sympathy of the people as to inflame them to a radical and erroneous legislation. I believe it wise to take some heed of this mild form of insanity, which would arrest absolutely, the future advance of medicine.

Perhaps a small committee of hospital or college men to explain the means, significance and humane methods of experimentation on lower animals to the public by lectures, or through the daily press, would educate the people sufficiently, and offset the ravings of those so perverted as to believe that animal life is worth more than human, yet they themselves may not be vegetarians.

NATIONAL DEPARTMENT OF HEALTH

To correlate all these forces working for the uplift of man, to increase his health and thereby his happiness, there can be no greater assistance than to elevate the profession to the highest honor to which it is entitled, and there is no more potent way to increase its field of usefulness, to engender for it the confidence of the people, to spread the gospel of health, to discredit fads and quackism, than to harmonize all departments under a national department of health. For this every physician, and every county and state society, and finally the national association should strive.

PROMISE FOR THE FUTURE

Thus, when we look down the long vista of time and see one disease after another mastered by the science of medicine, and recall those reassuring words of Charles Darwin, "It is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved." I feel, indeed, that the future holds many promises for the betterment of the human race.

330 North Charles Street.

Positive Tuberculin Tests in Syphilitics.—Nicolas and Favre state that they obtained a positive response to the von Pirquet cutaneous and to the Mantoux intradermal tuberculin tests in 75 and 93 per cent. respectively of 28 and 47 syphilitics free from any suspicion of tuberculosis. This proportion of positive responses is as high as is obtained among the *confirmed* tuberculous, and consequently, they assert, neither of these diagnostic tests is able to differentiate tuberculosis from syphilis.—*Bull. S* [illegible] *d. des Hôp.*, March 17, 1910, page 239.

Original Articles

THE EFFECT OF STOVAIN ON THE NERVOUS SYSTEM*

WILLIAM G. SPILLER, M.D.,
AND
SAMUEL LEOPOLD, M.D.
PHILADELPHIA

As stovain produces temporary anesthesia, it occurred to us that repeated injections of the drug probably would produce anesthesia of gradually increasing duration until finally we might obtain a persisting loss of sensation, which would be the result of organic change. Whether the same may be said of any other drug has not as yet been determined. We desired to ascertain *whether a systemic degeneration of the posterior roots and their continuation in the posterior columns of the cord is the common result of the repeated use of stovain. It* was important, moreover, to determine whether *the* paralysis that occurs in stovain anesthesia is of a motor or sensory type, i. e., whether it is produced by changes in the peripheral motor neurons, or is the result of abolition of all afferent impulses which normally pass over the posterior roots. Reflex action and all recognition of tonicity or relaxation of the limbs, and necessarily of the position of the limbs, are lost if all peripheral afferent impulses are cut off.

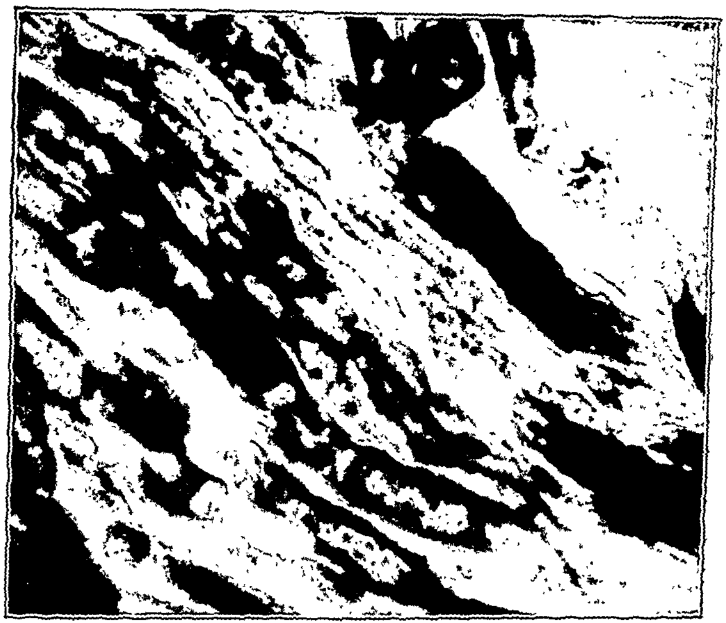

Fig. 1.—Section through a lower spinal ganglion, showing degeneration as small black dots, in the nerve fibers.

Some investigations regarding the effects of stovain on the nervous system have been made, but they are not numerous, and in certain respects the results do not fully correspond with those obtained by us.

Spielmeyer found changes in the cells of the anterior horns from stovain poisoning in man, the dog and the ape, of the character of reaction at distance. In man the cells of the spinal ganglia were not affected. He regards the cellular changes as primary notwithstanding their character. The alteration was seen only in scattered cells. He has never seen degeneration of the white matter in the cord of man; at most he has found changes in the nerve cells of retrograde type. He has had five cases, three in apes and two in dogs, in which the degeneration was confined to posterior root fibers and their continuation in the cord, so that it would appear that stovain degeneration may at times be confined to the posterior roots. He seems to have depended on the Marchi method chiefly, and there is no mention of teasing of nerve fibers and of staining them in the fresh state. The degeneration affected the short fibers of the posterior roots, the reflex collaterals more than it did the long fibers. The stovain, he thinks, attacks the extramedullary portion of the posterior roots, and the degeneration of the intramedullary portion is secondary to this. This process differs from tabes, in Spielmeyer's opinion, because in tabes the degeneration begins in the intramedullary portion of the posterior roots.

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* From the Department of Neurology and the Laboratory of Neuropathology in the University of Pennsylvania.

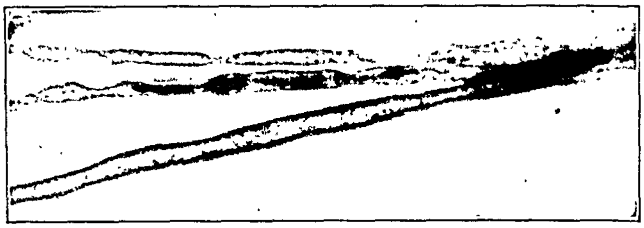

Fig. 2.—Fibers of a lumbar posterior root teased and stained with osmic acid, showing degeneration.

Spielmeyer states that the posterior roots outside the dural sac were intact, in contrast to the greatly degenerated cauda equina within the dural canal. In the spinal ganglia not only the peripheral but also the central nerve fibers appeared normal by osmic acid stain, so that changes were not noticed in the posterior roots until the roots had entered the intradural space and come into direct contact with the stovain. The degeneration of the anterior roots, in the cases in which the process was more extensive and was not confined to the posterior roots, began where the anterior roots made their exit from the cord, and the intramedullary portions of the anterior roots were intact. In both the posterior and anterior roots the products of disintegration were soon absorbed. The anterior roots were degenerated secondarily also in the portion beyond the dural sac, so that the anterior root in contact with a spinal ganglion frequently appeared degenerated while the ganglion and its nerve fibers at each end were intact. In ten experimental cases that Spielmeyer examined the posterior roots were predominantly or exclusively affected; he therefore concludes that stovain selects especially the posterior roots. He states that scar formation or inflammation plays no part; also that the degree of degeneration is not proportional to the amount of stovain used.

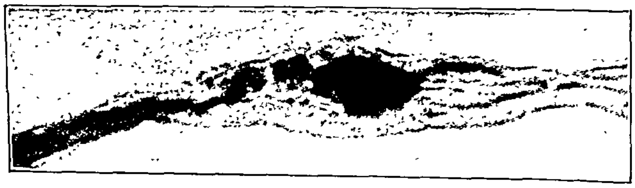

Fig. 3.—Fibers of a lumbar anterior root showing larger masses of degenerated myalin.

The changes in the cells of the anterior horns he found in man, as indicated in his illustrations, were pronounced. He found in animals swelling, displacement of the nucleus, and chromatolysis in the cells of the spinal ganglia. He thinks that the sensory and motor disturbances that occur after stovain anesthesia in man may be caused by similar changes in the spinal roots and in the periphery of the spinal cord, as are the temporary ocular muscle palsies from cellular changes; but pathologic studies are wanting in these cases.

Root degeneration has not been found in man, although Spielmeyer[1] studied the specimens from sixteen cases. In half of these cases death occurred too soon to permit the Marchi method to be employed. These findings are remarkable, as root degeneration was obtained in all his injected animals. The symptoms following injections in apes were not very positive. In dogs he observed temporary paraplegia with disturbance of sensation and of micturition.

The investigation as conducted by van Lier[2] and Wossidlo,[3] showed that the cellular changes were temporary. Wossidlo found, after injection, paresis of the posterior limbs, restlessness, frequent respiration and clonic spasm of the posterior limbs. Usually these symptoms disappeared after artificial respiration. In some instances opisthotonos occurred. The lumbar region was examined one to twenty-four hours after the injection, and he found chromatolysis and swelling of the cell. When stovain was used the most pronounced changes were seen after one hour. Scarcely any normal cells were found in the anterior horns. The changes were more pronounced after two hours, and improvement was noticed in the cellular condition after six hours. The cells were normal after twenty-four hours. Van Lier's findings were similar. They used rabbits. Wossidlo concluded that tropacocain was less dangerous than stovain or novocain and that changes occurred in the cells in lumbar anesthesia, but that they were not serious enough to prevent the use of drugs in this method.

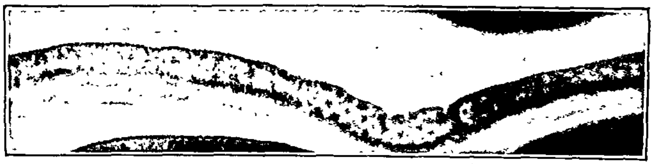

Fig. 4.—Fibers of a peripheral nerve from a hind limb, showing degeneration. In many fibers the degeneration was more advanced.

Rehn could not demonstrate any changes in the cells of the anterior horns until after three days; then they were found in the lumbar, thoracic and cervical regions, and yet only a few cells in any one section were altered. The alteration began at the periphery of the cell, and the nucleus became peripheral. Animals that had lived ten to twenty-one days showed by the Marchi method, degeneration in the entire periphery of the cord and in the entire posterior columns, in the latter apparently, systemic in character. Only cells in the anterior horns were affected; sensory cells were intact. Rehn's report[4] is of findings obtained by Klose and Vogt.

The technic of our experiments consisted in performing lumbar puncture on five dogs with careful avoidance of infection. The stovain solution used on Dogs D and E was boiled. The dose of each stovain injection varied from 0.05 gm. to 2 gm. and except in Dogs A and B, in each of which only one injection was given, the injections were usually at intervals of two to three days.

The symptoms may be divided into the temporary and the permanent. The temporary consisted of flaccid paralysis and complete or partial sensory loss. The hind limbs showed flaccid paralysis, while the entire body frequently showed the loss of sensation, implicating even the ear. Bladder and rectal control was lost, and the tendon reflexes were either diminished or absent. These symptoms occurred immediately or several minutes after the injection was given, and persisted from one to several hours.

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[1] Spielmeyer: München. med. Wchnschr., Aug. 4, 1908, p. 1629; Neurol. Centralbl., Jan. 16, 1909, p. 69.
[2] Van Lier: Beiträge zur klin. Chir., 1907, liii, 413.
[3] Wossidlo: Arch. f. klin. Chir., 1908, lxxxvi, 1017.
[4] Rehn: Arch. f. klin. Chir., 1909, xc, 329.

The permanent symptoms consisted of ataxia, decreased sensation, and, in Dog E, loss of patellar reflex. The symptoms became permanent after the third injection, remaining until the end of the experiment. The ataxia was recognized by the irregular gait, and the tendency to stand with the hind legs well apart, and the peripheral part of the hind limbs well on the ground.

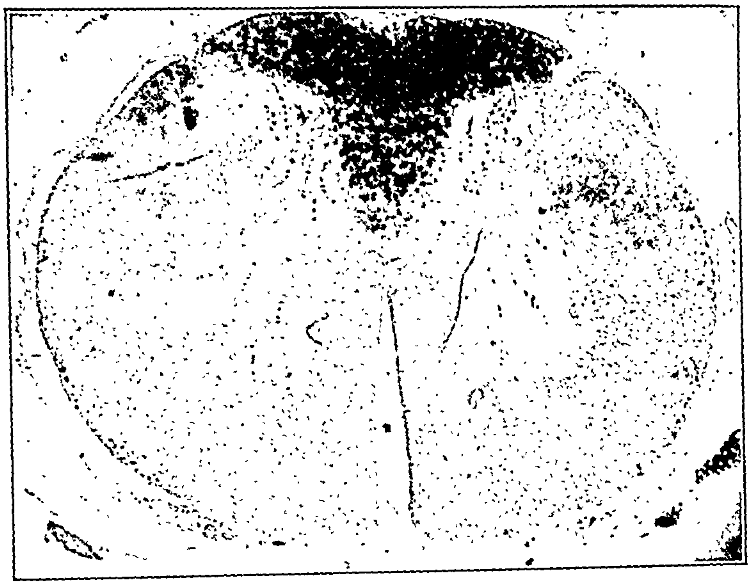

Fig. 5.—Section through the lumbar region (from retouched photograph) showing intense degeneration of the posterior columns.

Sensory disturbances were demonstrated by the clip test. Dog A lived one hour after the injection, Dog B four hours, Dog C seventeen days, Dog D 2 months and Dog E forty-two days. The investigations have not been completed, but the results obtained are interesting.

The alterations of the cells of the anterior horns were not important in any of the five dogs; in some slight central chromatolysis, and displacement and swelling of the nucleus were found. Dog D showed degeneration in the columns of Goll, more marked on one side, but dog E gave the most important results, and the following description is from the sections obtained in this case.

LUMBAR REGION

Axis cylinders in the periphery of the anterolateral and posterior columns were found here and there considerably swollen; some were of large size; swollen axis cylinders were seen in the root entrance zones of the posterior columns, but otherwise not in the posterior columns except near the periphery. A moderate degree of cellular reaction to the stovain was detected in the pia and roots of the cord in the form of round cell infiltration, but never as cells of polynuclear type. This is not a surprising finding and resembles what is seen in tabes. One would expect some cellular reaction to a poison affecting the nervous system as does stovain. A very slight perivascular round-cell infiltration was seen here and there in the cord; it was so slight as to be of no importance, and its existence was disputable. The swelling of the axis cylinders in the anterior and posterior roots was very distinct, and the swelling affected most of these axis cylinders. One forms the impression that the axis cylinders were more swollen in the anterior than in the posterior roots.

The posterior columns in the lumbar region were degenerated, as shown by the Marchi method, throughout a transverse section, but much less so in the ventral zones. The reflex collaterals were also much degenerated, and the degenerated fibers could be traced forward into the anterior horns. Small black dots were found along some of the anterior roots within the spinal cord, and this finding indicates a moderate amount of degeneration here. A slight degeneration was found by the Marchi method along the periphery in the anterolateral columns; it was far less intense than in the posterior columns. In the thoracic region the degeneration of the posterior columns was confined to the columns of Goll; the columns of Burdach seemed to be intact. The degeneration of the anterolateral columns in the thoracic region was insignificant. The lumbar sections were taken fully one and a half to two inches above the point of injection.

Anterior and posterior roots taken between the dural cavity and the posterior ganglia were teased in the fresh state and stained with a 1 per cent. aqueous solution of osmic acid. They presented considerable degeneration, chiefly in the form of minute black granules within the neurilemma sheaths, and the degeneration was more advanced in the anterior roots. One could not conclude from this finding that stovain affects the anterior roots more than the posterior; rather the finding would seem to imply that, the roots having been affected by the stovain within the dural sac, secondary degeneration would be found in the portion of the anterior roots examined, and retrograde degeneration in the portion of the posterior roots examined. Nerve roots taken from within the interior of the dural canal unfortunately were not examined by this method.

The nerve fibers in one of the lower spinal ganglia, placed in the fresh state in 1 per cent. osmic acid solution, showed intense degeneration of the fine granular variety. The cells of the ganglion presented little degeneration.

A nerve taken from the hind leg appeared intensely degenerated, when placed in the fresh state in osmic acid.

The method of studying nerve fibers in the fresh state with osmic acid, employed by us, does not appear to have been used in previous studies with stovain injections; it has given most satisfactory results. It is probably because of the employment of this method that we have obtained distinct degeneration in the posterior roots between the dural cavity and the ganglion as well as in the ganglion itself—findings not obtained by Spielmeyer. Our results differ from those obtained by others in the absence of important alteration of the cells of the anterior horns, although we employed the thionin stain for examining these cells.

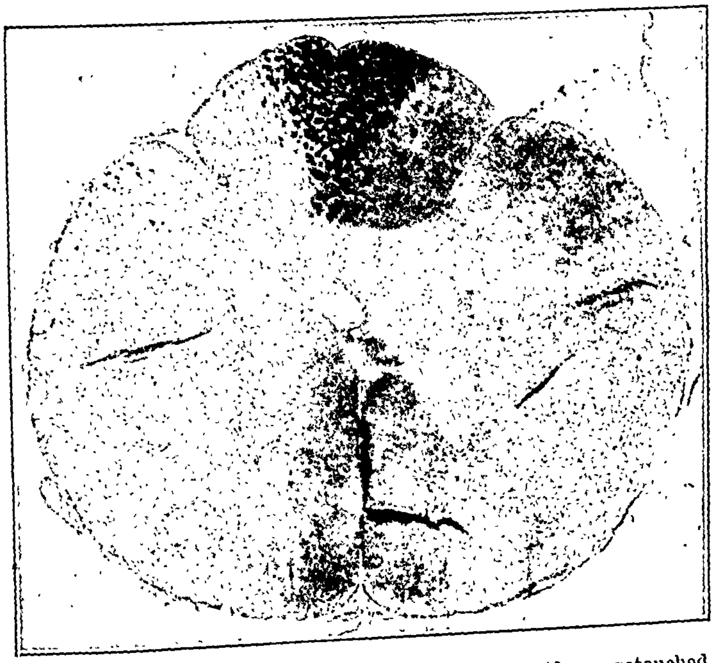

Fig. 6.—Section through the thoracic region (from retouched photograph) showing degeneration confined to the columns of Goll.

It seems clearly demonstrated that stovain affects especially the anterior and posterior roots; the degeneration of posterior root fibers in our sections was intense; what is worthy of note, the degeneration of the intramedullary portion of the lumbar and sacral posterior root fibers in the thoracic region was still intense. The posterior thoracic roots were unaffected. Stovain evidently also causes slight degeneration in the periphery of the anterolateral columns, but has less effect here than on the nerve roots.

These lesions obtained by us could not have been produced by the trauma of the needle, as the sections of the lumbar region examined were one and a half to two inches above the point of injection, and yet the posterior and anterior roots were greatly degenerated.

It would be unwarranted to apply these findings too strictly to man, as no grave changes have been found as yet in the human spinal cord. At most our findings would show that repeated injections of stovain might be injurious, and would make one cautious in employing several injections within a short time in the same subject. We do not know whether stovain has more effect on the nervous system of the dog than on that of man.

Fig. 7.—One of the dogs (Dog D) experimented on, showing ataxia of hind legs.

The investigations show further that the paralysis produced by stovain is of the motor type, as the anterior roots were greatly degenerated.

NOTE ON CORRECTING THE PROOF.—Investigations made with magnesium sulphate have not given clinical results similar to those obtained with stovain. Four injections of ten drops each of a saturated solution of this drug have been made into the dural cavity of a dog, extending over the period from March 31 to the present time. No ataxia has occurred, the dog walks with the hind legs close together, and the reflexes are normal, but sensation of the hind legs seems to be slightly diminished.

We are indebted to Dr. Allen J. Smith for the photographs.

1906 Chestnut Street—1632 North Franklin Street.

Campaign Against Uterine Cancer in the Argentine Republic.—The *Sociedad de Obstetricia y Ginecologia* of Buenos Aires is sending out a blank circular to the general practitioners and gynecologists throughout the country asking for data in regard to the number of patients with uterine cancer that were in their charge during 1909. Details are asked in regard to the operability, operations, results of operation: survival for less than one year, less than 2, 3, 4, 5 or more years; deaths from the operation or complications, from other affections, or the ultimate outcome not known. The number of deaths from cancer of the genital organs in Buenos Aires amounted to 31 per cent. of the total female mortality from affections of the genitourinary apparatus during 1908. The appeal is published in the *Semana Medica*, 1910, xvii, 96.

FRACTURE OF THE PATELLA

THE OPERATION OF CHOICE*

E. P. MAGRUDER, A.M., M.D.
Assistant Professor of Surgery, Georgetown University; Associate in Surgery, Emergency Hospital
WASHINGTON, D. C.

TYPES OF FRACTURE

Before the birth of antiseptic surgery Severino, the brilliant Neapolitan surgeon, in 1598 performed the first open-suture operation on a fractured patella. His patient died. Three hundred years later, Lord Lister, the father of antiseptic surgery, repeated the same operation. His patient lived. This bit of history is conclusive of little but suggestive of much.

Most frequent between the thirtieth and fiftieth year, rare under the twentieth, fracture of the patella is scarcely ever seen in children under 10. Eighty-eight per cent. of the cases are found in men. Of all bone fractures that of the patella represents 1.4 per cent. The decade between 40 and 50 years yields the highest number of cases.

We may distinguish the open and the closed types, the transverse and the longitudinal, the oblique, the stellate, and the comminuted. As many as nine fragments have been found in this fracture. Avulsions of the tip and of the basal margin are reported.

The line of division is central, or more commonly below rather than above the middle of the bone. The prepatellar fibrous tear may be above or below the line of bony separation. Often the lower end is ruptured; rarely the upper. Twofold and threefold transverse fractures are reported, the latter the result of refracture. In the compound fracture the T or Y-type is occasionally seen. The longitudinal form is rare. Comminution is frequent in direct violence, which constitutes 80 per cent. of all fractures of this bone. A fissure fracture may extend to the cartilage without involving it. The fracture may be simply subaponeurotic, with neither displacement nor other symptoms and discernible only through the *x*-ray.

Associated injuries are common and very significant. The dense ligamental fascia over the bone is almost always ruptured, the tear extending into the capsule, internally into the reinforcing tendinous fibers of the vastus internus and externally into the fascia lata—the extensor lateral expansion of the leg. With this condition the prepatellar bursa may be contused and there may be an effusion of blood into the joint.

The line of the ruptured aponeurosis is not always identical with that of the fractured bone. More frequently it lies above or below it, an intervening tab preventing bony union. This was the clinical observation of Macewen and König, afterward verified by Hoffa in his experiments on the cadaver. Barlöcker reported 28 cases with operation, in every one of which he found the fibroperiosteal intervention.

ETIOLOGY

The condition is usually the result of a fall, a blow, or a gunshot wound. Bähr and Rossi's statistics show that the effect of muscular contraction has been overrated. This variety of fracture can occur only when the knee is extended. Rossi held that ruptures of the quadriceps tendon or of the ligamentum patellæ was in-

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* Read before the Medical Society of the District of Columbia, Feb. 9, 1910.

ing even the ear. Bladder and rectal control was lost, and the tendon reflexes were either diminished or absent. These symptoms occurred immediately or several minutes after the injection was given, and persisted from one to several hours.

The permanent symptoms consisted of ataxia, decreased sensation, and, in Dog E, loss of patellar reflex. The symptoms became permanent after the third injection, remaining until the end of the experiment. The ataxia was recognized by the irregular gait, and the tendency to stand with the hind legs well apart, and the peripheral part of the hind limbs well on the ground.

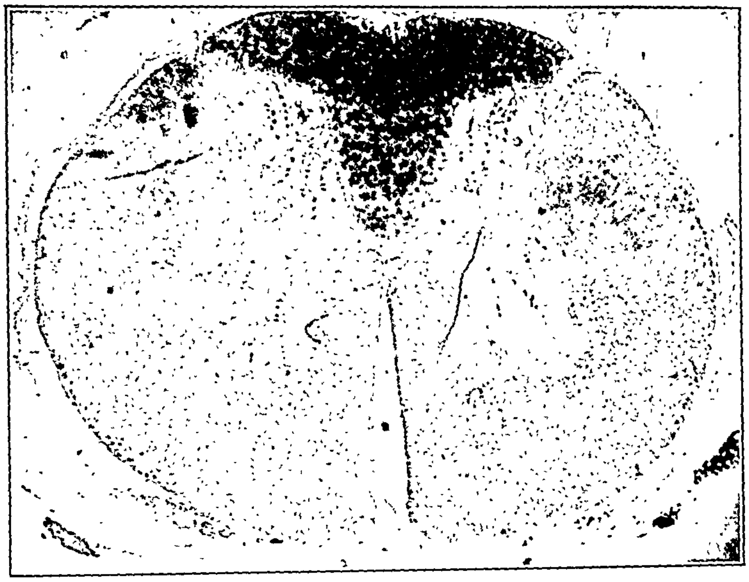


Fig. 5.—Section through the lumbar region (from retouched photograph) showing intense degeneration of the posterior columns.

Sensory disturbances were demonstrated by the clip test. Dog A lived one hour after the injection, Dog B four hours, Dog C seventeen days, Dog D 2 months and Dog E forty-two days. The investigations have not been completed, but the results obtained are interesting.

The alterations of the cells of the anterior horns were not important in any of the five dogs; in some slight central chromatolysis, and displacement and swelling of the nucleus were found. Dog D showed degeneration in the columns of Goll, more marked on one side, but dog E gave the most important results, and the following description is from the sections obtained in this case.

LUMBAR REGION

Axis cylinders in the periphery of the anterolateral and posterior columns were found here and there considerably swollen; some were of large size; swollen axis cylinders were seen in the root entrance zones of the posterior columns, but otherwise not in the posterior columns except near the periphery. A moderate degree of cellular reaction to the stovain was detected in the pia and roots of the cord in the form of round cell infiltration, but never as cells of polynuclear type. This is not a surprising finding and resembles what is seen in tabes. One would expect some cellular reaction to a poison affecting the nervous system as does stovain. A very slight perivascular round-cell infiltration was seen here and there in the cord; it was so slight as to be of no importance, and its existence was disputable. The swelling of the axis cylinders in the anterior and posterior roots was very distinct, and the swelling affected most of these axis cylinders. One forms the impression that the axis cylinders were more swollen in the anterior than in the posterior roots.

The posterior columns in the lumbar region were degenerated, as shown by the Marchi method, throughout a transverse section, but much less so in the ventral zones. The reflex collaterals were also much degenerated, and the degenerated fibers could be traced forward into the anterior horns. Small black dots were found along some of the anterior roots within the spinal cord, and this finding indicates a moderate amount of degeneration here. A slight degeneration was found by the Marchi method along the periphery in the anterolateral columns; it was far less intense than in the posterior columns. In the thoracic region the degeneration of the posterior columns was confined to the columns of Goll; the columns of Burdach seemed to be intact. The degeneration of the anterolateral columns in the thoracic region was insignificant. The lumbar sections were taken fully one and a half to two inches above the point of injection.

Anterior and posterior roots taken between the dural cavity and the posterior ganglia were teased in the fresh state and stained with a 1 per cent. aqueous solution of osmic acid. They presented considerable degeneration, chiefly in the form of minute black granules within the neurilemma sheaths, and the degeneration was more advanced in the anterior roots. One could not conclude from this finding that stovain affects the anterior roots more than the posterior; rather the finding would seem to imply that, the roots having been affected by the stovain within the dural sac, secondary degeneration would be found in the portion of the anterior roots examined, and retrograde degeneration in the portion of the posterior roots examined. Nerve roots taken from within the interior of the dural canal unfortunately were not examined by this method.

The nerve fibers in one of the lower spinal ganglia, placed in the fresh state in 1 per cent. osmic acid solution, showed intense degeneration of the fine granular variety. The cells of the ganglion presented little degeneration.

A nerve taken from the hind leg appeared intensely degenerated, when placed in the fresh state in osmic acid.

The method of studying nerve fibers in the fresh state with osmic acid, employed by us, does not appear to have been used in previous studies with stovain injections; it has given most satisfactory results. It is probably because of the employment of this method that we have obtained distinct degeneration in the posterior roots between the dural cavity and the ganglion as well as in the ganglion itself—findings not obtained by Spielmeyer. Our results differ from those obtained by others in the absence of important alteration of the cells of the anterior horns, although we employed the thionin stain for examining these cells.

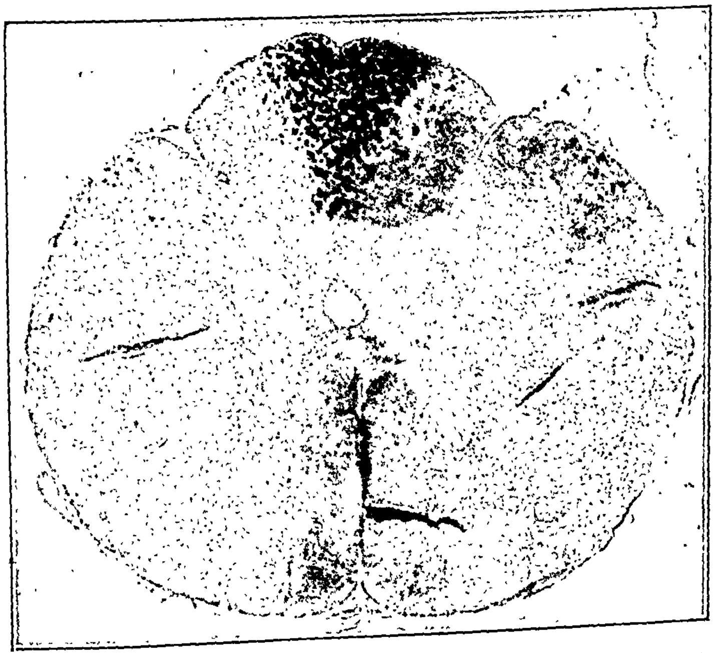


Fig. 6.—Section through the thoracic region (from retouched photograph) showing degeneration confined to the columns of Goll.

It seems clearly demonstrated that stovain affects especially the anterior and posterior roots; the degeneration of posterior root fibers in our sections was intense; what is worthy of note, the degeneration of the intramewithstand his weight. It is best to continue this protection and support to the knee for six months, following passive and active motion at the end of the sixth week. Crutches are discarded at eight weeks, the cane and removable splint at six months. Due care during all this time should be exercised to avoid falls, sudden and jerking movements to prevent refracture.

Hemorrhage, if imminent, may be retarded, if not prevented, by wet compress, bandage, and elevation in the Volkmann splint, to relax the extensor; or the region of the knee may be firmly bandaged from below upward with a rubber elastic bandage and put on a well-padded posterior splint; unmolested for forty-eight hours. If there is much distention about the joint Schede aspirates.

If open suture is inexpedient Bardenheuer and Lichtenauer use weight extension, 30 to 40 pounds, to relax the extensors, continuing this from four to six weeks until union is accomplished.

Fibrous union often occurs with a limited extension and flexion, as is seen in the protracted fixation of a plaster splint, with such sequelæ as shrinkage of the capsule, adhesions, and atrophy of the quadricipital group.

Where the lateral expansions have not been involved, on the other hand, only a small amount of functional impairment may follow the fibrous cicatrix.

Metzger, Tilanus, and others, have recommended early massage and mobilization. Tapotement and kneading are begun during the first forty-eight hours following the injury, directed to the joint as well as to the muscles of the leg and thigh—the fragments held the while by an assistant. The upward stroke aids in blood resorption. Individual cases are helped by the faradic current. Under this treatment passive motion is begun at the end of the first week; the patient is allowed up at the end of the second, when light exercise is instituted; first walking on crutches, then with a cane; finally at the end of the sixth week, he is discharged.

The extreme methods of zum Busch and of Kraske are not to be recommended. For as observed by Soutter, the value of massage is unquestionably overestimated. True, it does aid resorption of intra-articular, peri-articular and intramuscular diffusion. Increase and preservation of muscular tone can only be accomplished through exercise. If the reserve extensors are ruptured entirely or even for the greater part, loss of function leads to inevitable atrophy of the extensors in spite of ample massage and early exercise. Further, the muscular contraction under these circumstances separates more widely the fragments and adds to the labor of operative procedure later on.

Aspiration of the blood is unsatisfactory because of the debris, clots, etc., and is attended with the danger of infection.

To despair of bony union at the outset is for the physician to acknowledge a misplaced confidence on the part of the patient. On the contrary it would seem advisable in most cases to attempt exact coaptation and ossific union by the direct method, and to prevent ill results by instituting muscular massage at the beginning, followed by passive motion during the first week, and active motion after the second.

The Operative Method

Trendelenburg recommended a delay of eight days in the operation with a view to determine the chances of recovery without it and to allow for subsidence of the swelling. If open suture is clearly indicated why should we delay twenty-four hours unless it be to impugn our present-day technic? Do we not get the patient out just eight days earlier by an eight days' earlier operation?

As a rule the operation should be as early as possible.

Various incisions are in use, such as the transverse— the longitudinal |, the semilunar with convexity upward ∩, the semilunar with convexity downward ∪, the semilunar with convexity inward), the semilunar with convexity outward (, and modifications of all six of these.

Some use drainage, some do not. Intra-articular drainage except in plainly septic cases is to be condemned.

Some irrigate the articulation, some use the dry sponge, some do neither. The solutions used are bichlorid, 1:1500; phenol in various strengths, physiologic salt solution, and sterile hot water.

For suturing both hard and soft structures, materials of both absorbable and non-absorbable character are in use. Some use pegs. Most common of the absorbable sutures may be mentioned plain and chromic catgut, and kangaroo tendon; of the non-absorbable, silver wire, iron wire, aluminum bronze wire, copper wire, Pagenstecher thread and heavy silk.

Men of equal surgical skill and ability differ widely as to their methods of operation. What then is the best method? The answer to this question should be based not only on theoretical grounds but on the study of the pathologic conditions found and on the final results.

When operation is clearly indicated I believe it done best when done most quickly. What is the operation of choice for fracture of the patella? Having observed and followed up a number of cases I would humbly suggest the following as the operation of choice:

The time should be as soon as possible after the injury; the operation should be done under ether anesthesia, with the strictest aseptic technic, gloves and exclusively instrumental handling; the semilunar incision with convexity downward should be used, commencing a little above the fracture line internally and carrying the oval incision downward and below the tibial tubercle and up on the external lateral surface to a point opposite that of the beginning. The flap should be turned back on itself to expose both the fractured bone and the ruptured aponeuroses, and the interposed fibroperiosteum removed. The joint should be thoroughly and completely irrigated and all clots and liquid blood removed with hot sterile physiologic salt solution (or 1:5000 bichlorid, followed by sterile water, if there is the slightest suspicion of infection). Stout bone-forceps now hold steadily the fragments while the bone-drill, directed obliquely through two thirds its thickness and always avoiding the joint, is passed through each fragment, the holes in the upper and lower fragments being in exact alignment and always as few as possible. Both points of entrance and points of exit in each bone should correspond with those of the other. The drill-holes throughout are from without inward and, as stated, always as few as circumstances will permit, and just large enough to accommodate wire of the smallest diameter practicable. All drilling is completed before inserting the wire. The wires, preferably silver or iron, passed, they are grasped with blunt-nosed forceps, and while the assistant carefully approximates the margins, the surgeon tightly twists the wires three or four times on themselves, cuts them off a quarter-inch long, bends them down and buries them beneath the fibroperiosteum, which is then sutured above. If the fibro-periosteum be interposed and is ragged when drawn out, its edges should be neatly trimmed of roughened projections, carefully coapted after the bone is sutured, and stitched, first with interrupted chromic catgut and reinforced with a continuous suture of the same material. The rent in the capsule, so common on either side of the fractured bone, is repaired with equal carefulness and with the same suture material. An additional continuous suture of fine chromic gut is used to repair the fibrous covering of the patella incised in raising the oval flap. The skin flap is then sutured with three light silkworm-gut sutures, the first in the center at the tibial tubercle, followed by one each at the halfway point on the ascending lateral line of incision, and this in turn followed by a continuous fine plain catgut suture of the entire skin wound. No drainage is used; a moist bichlorid compress over the site of the wound is followed by a sheet-cotton bandage from toes to middle thigh, and over this a light removable split plaster mold, applied with the limb in complete extension, in which it is kept, heel slightly elevated, with as little interference as possible for two weeks. Then massage is used, passive motion, light exercise; walking on crutches, then with a cane, and then with mold splint alone; and finally, at the end of the sixth week, without any support whatever, the patient is discharged as cured.

In support of this method the following points of advantage may be cited:

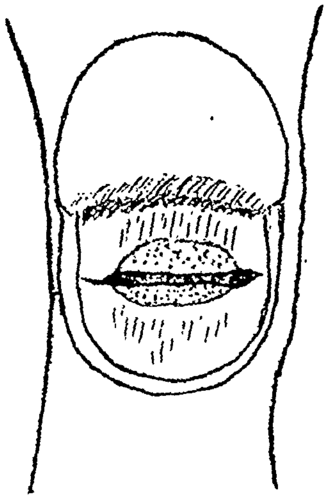


Fig. 1.—Incision of the author's choice.

There is no loss of time; the safest anesthetic is used; absolute exposure of the entire field of injury is obtained, especially of those most important structures, the lateral expansions; the articulation is made perfectly clean with a non-irritating solution; a suture too small to excite irritation is used and one that is non-absorbable, therefore effective to hold till union has had abundant time to take place; there is no necessity for post-operative drainage; activity is too late to fear fracture recurrence, too early to invite atrophy; and though of exceptional occurrence, a tear of the accessory ligaments with no separation of the bony fragments noticeable on inspection or palpation would be exposed. Immediate operation admits of union by first intention.

Fibrous union leaves a weakness, an uncertainty, an instability, a timidity on the part of the patient, frequently resulting in his falling, which in turn induces refracture. Absolute functional recovery in fibrous union is exceptional.

Small incisions fail freely to expose the operative field, render difficult the cleansing of the joint and the repair of the lateral capsular and aponeurotic tears.

The vertical incision leaves a cicatrix exposed to pressure on kneeling and remains tender, limits the field of operation, makes difficult the passage of wires; the rents in the lateral expansion are not easily reached; and manipulation of the fragments is difficult.

The transverse incision is open to the objection that often the osseous and cutaneous cicatrices correspond, increasing the facility for compound refraction; infection, too, passes readily from the outer to the inner wound; a stitch abscess may produce a septic arthritis; drainage is difficult.

A flap with convexity downward has a better arterial and nerve supply; it admits most easily of drainage.

Irritating antiseptic irrigations, such as phenol, bichlorid, etc., are injurious to the joint endothelium, lower its resistance to infection, and predispose to inflammation. Physiologic salt solution accomplishes the same purpose as the irritants without any of their disadvantages. Dry sponging, in cases in which the parts may readily be reached, is preferable to either.

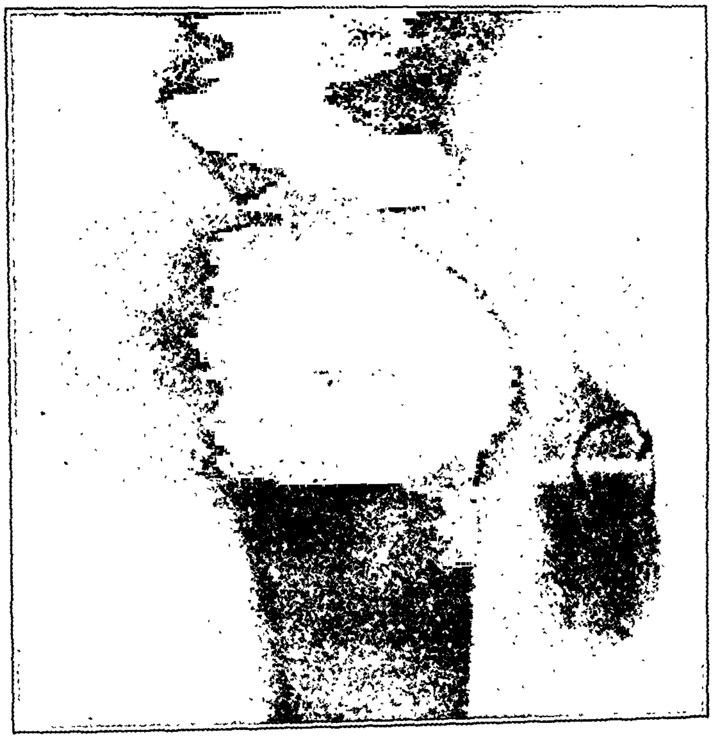


Fig. 2.—Author's method of wiring. Joint radiographed day after operation by Dr. T. A. Groover; the wire does not enter the joint; its head is turned down and buried beneath the fibroperiosteum.

Patient (for whom author is indebted to Dr. George Tully Vaughan), A. H., aged 20, male; on the afternoon of July 14, 1909, while running, stumbled, fell to the ground, and was unable to assume the upright position afterward. He was brought to the Emergency Hospital, where examination showed transverse fracture of patella, fragmentary separation 2 inches, showing considerable involvement of the lateral expansions; knee-joint much swollen, painful, and distended with blood; extension lost; wide lateral movements of the fragments. Operation next morning—open method, wired—patient discharged, cured, Aug. 21, 1909. The technic, operative and post-operative, was that described herein.

The question may be asked, when the open operation is indicated, when contraindicated. It is indicated in fractures productive of functional joint impairment, such as those in which fragments have entered the articulation; in the one-legged, in whom ankylosis following fracture would produce complete inability to walk; in bilateral fracture of the patella; in refractures; in ununited fractures, the result of attenuated fibrous union or faulty position; in unrepaired aponeurotic laceration.

The open method may be confidently recommended in the presence of an aseptic environment, a competent surgeon, safe suture material, favorable physical condition of the patient, bad position of fragments, in all compound fractures, all comminuted fractures, in profuse intra-articular effusion, hemorrhagic or inflammatory, in interposition of the fibroperiosteal tissues.

In compound fracture the necessity for open suture is self-evident; so, too, if bandaging fails, and also in the presence of a weak, extensile fibrous repair.

When is it contraindicated? In the diabetic, in advanced tuberculous disease, in chronic cardiac, renal, or hepatic disease, in longitudinal fractures of the closed type and without displacement, in simple subaponeurotic or incomplete fractures, and those in which separation of the fragments is so slight as to be barely detectible.

Malgaigne's clamp and Trélat's modification thereof are to-day merely historic.

To the subcutaneous work of von Volkmann, in 1868, of the earlier labors of Kocher, Ceci, Heusner, Butcher, Barker, and the rest, I am compelled to make the same objection as to every other subcutaneous method, namely, that the interposition of the periosteum and the lateral tears are disregarded; further, that the joint may be opened. The only point in its favor is the fact that it was the forerunner of the direct suture method.

As between Lister's transverse incision at the fracture line, and a longitudinal or transverse incision not in line with the fracture, the latter is to be preferred.

Strict asepsis is the first requisite and the last indispensable point in the technic of the open operation. Nowhere are results better with it; nowhere worse without it. An infected arthrotomy is more to be dreaded than an infected laparotomy. Palpation with a gloved hand should be reduced to the minimum. If possible the operation should be entirely instrumental.

If the quadriceps is much retracted and the attempt to approximate the fragments fails when the thigh is flexed, the muscles fully relaxed, and the knee extended, then a plastic operation may be done by division of the ligamentum patellæ or the quadriceps.

Where separation is considerable, Rosenberger, Helferich, Wolff, Tenderich, and others have recommended osteoplastic operations with varied results. All methods failing, strong elastic bands may be made to duplicate the action of the extensors and must be permanently worn. Ankylosis following resection of the patella is better for those who cannot afford expensive apparatus —a last resort it is true, but to be preferred to a limb incapable of extension.

Suture of the ruptured peripatellar and parapatellar aponeuroses is of the utmost importance. Whether it be of the quadriceps tendon or of the ligamentum patellæ, it is an injury the repair of which is equal in importance to that of fracture of the patella itself. Immediately following fracture of the patella the lateral expansion of the rectus, vasti, and sartorius, together with the fibers of the fascia lata proceed at once on the vicarious function of extension.

Following are statistics of thirty cases treated in the Massachusetts General Hospital, in which final results were noted:

Unsutured, 6 cases, as follows:

Result.	Cases.	Per cent.
Perfect	3	50
Fair	1	16.5
Poor	2	33.5
Serviceable knees	..	66.5

Sutured, 24 cases, as follows:

Result.	Cases.	Per cent.
Perfect	17	65.5
Fair	5	19.0
Poor	4	15.5
Serviceable knees	..	84.5

CONCLUSIONS

As between the operative and non-operative methods, in the absence of a competent surgeon with all antiseptic precautions, the non-operative, conservative, treatment should be the rule. On the other hand operative procedure *obtains a better functional result and obtains it* much more quickly than the non-operative procedure, and may be confidently relied on in the hands of those who have formed the habit of taking all the necessary precautions.

With operation, the chances for bony union are far greater; the torn aponeuroses can be repaired and there is far less danger of refracture. The most satisfactory results are obtained by the oval incision, convexity downward, and suture of the patella; by this method joint diffusion is promptly relieved by irrigation or dry sponging; the fibroperiosteal interposition is entirely removed; apposition of the fragments is exact; tilting is corrected; massage and passive motion can be begun earlier, the whole process of repair, recuperation and convalescence is hastened. It admits of prompt and complete removal of all detached bony fragments; all articular effusions, and all extravasated blood, intra-articular or extra-articular, liquid or clotted.

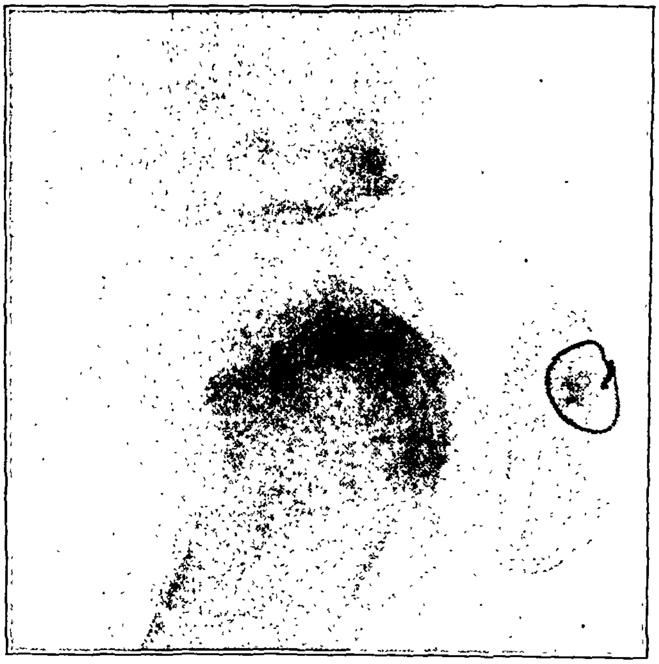


Fig. 3.—Same case as shown in Figure 2. Joint radiographed seven months after operation by Dr. T. A. Groover; illustrating bony union; function almost perfect, flexion 45°, extension 180°, respectively. No atrophy of the quadriceps; patient goes up and down stairs without difficulty.

The subcutaneous operation is to-day obsolete. Its latest chief advocates, König and Kocher, are now most enthusiastic in their adoption of the open method.

The circumferential loop has few followers, as has that method by which the bony fragments are simply apposed and the suturing confined to the peripatellar tissues.

The dangers of the open method, done under proper precautions and by competent men, are practically *nil*. A point deserving of special emphasis is the after-care of the patient—an absolute requisite to success.

In interposition, operation is imperative.

Wire should never be carried deep enough to penetrate the joint as it will irritate the cartilage and produce an arthritis.

Impaired function results in union from faulty position.

The combination of the interrupted and reinforced continuous chromic catgut suture is the making of assurance doubly sure.

Absolutely accurate coaptation and repair of the accessory extensor aponeuroses are vitally essential—in some cases even *more important than coaptation and repair of the bone itself.* Eminent authorities to the contrary notwithstanding, bony union of the transverse fracture—the one most difficult of functional repair—can certainly be accomplished if the carefully sutured bone is reinforced by an equally carefully sutured aponeurosis.

If exposure is decided on at all then ample exposure of the field of injury under aseptic precautions is always justifiable.

Other things being equal, the oval incision, convexity downward, admits of the best drainage, should necessity for drainage arise; while at the same time it retains anatomically the best arterial and nerve-supply.

The most progressive European and American surgeons are in one accord that by far the best results are obtained by the open method and suture.

The suture material, if non-absorbable, should be the smallest consistent with the requirements, and the possibilities of pressure-necrosis should be reduced to the minimum by complete extension of the limb held in the oblique position, which insures the great desideratum of every method of treatment—complete inactivity of the quadriceps extensor.

A WATER-CURTAIN FOR COOLING ROOMS

PRACTICAL FOR CROWDED WORKROOMS, FACTORIES, HOSPITAL WARDS, TENEMENT HOUSES, AND FOR COLLECTING DUST

WILLIAM J. MANNING, M.D.
Medical and Sanitary Officer, Government Printing Office
WASHINGTON, D. C.

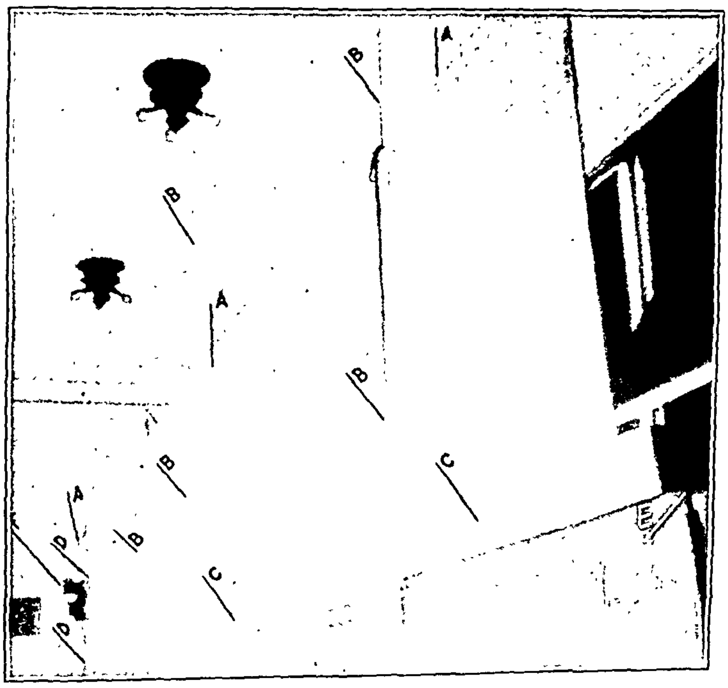
It is intended to show, by the illustration here presented, a simple, cheap, but effective, method for reducing the temperature and collecting dust in sick-rooms, crowded factory workshops, tenement houses, etc., during the summer in large cities, which may also be adapted to residences in tropical countries.

Various methods have been in vogue for cooling purposes in large buildings by the use of ammonia and brine coils, but they are very expensive to instal, often costing thousands of dollars, and are heavy and cumbersome. There are other possible objections to be urged against the refrigerator method. For instance, all windows in the rooms must be kept closed, and for this reason, in the subtraction of moisture from the atmosphere, there is a possibility that with the condensation of the aqueous vapor in the form of frost on the coils other necessary normal constituents of the atmosphere are extracted and withdrawn at the same time. Too great a chill may be produced in contrast to the hot weather and high temperature elsewhere existing outside the building in which the ammonia system has been installed, with, of course, disastrous results, so far as health is concerned, to employees or occupants of the building on emerging into the heated atmosphere from the cooler air, or the rapid cooling of a perspiring body on sudden, incautious entrance into a chilled room.

The simple, safe, old-fashioned method of shaking out wet towels in the sickroom and hanging them over the head of the bed to cool the temperature, as practiced for many years in country districts, gave me the first idea on which I have attempted to elaborate somewhat and to utilize and adapt it in a large way to modern living and working conditions in large cities during the hot season.

The system is one of absorption of moisture by the atmosphere and varies, of course, with the humidity present in the air as to the amount of water taken up by evaporation. The tests were made in the emergency room at the Government Printing Office, Washington, D. C., which is approximately 45 by 15 feet in size. I have been enabled to reduce the temperature from day to day, the reduction varying from 6 to 11 degrees F., through the amount of humidity present and temperature of water during the past summer. When a temperature of 96 F. or 98 F. exists, in the shade, the reduction mentioned is very much to be appreciated.

The water-curtain is made up and consists of a tin speaking-tube (*aa*), the sections of which have been soldered together and perforated with one-eighth-inch holes at a space of one inch, to make the required length of 40 feet for the experiment. The speaking-tubes, of course, by adding sections, can be made any required length up to even 300 or 400 feet, if necessary. From this hangs suspended a strip of cotton twill some 3 feet in width and 40 feet in length. In the top of the curtain a large hem has been taken, through which the perforated tin speaking-tube is run, somewhat like a window-blind stick in a window-curtain. The tube is connected at one end with an inlet (*dd*), consisting of a piece of rubber tubing connected, in turn, with a water-faucet on the wall, the other end of the described tin tube being blind. Perforations in tin tube can be made with a nail. The rubber tubes at *dd* and *ee* are connected with trough and tin speaking tube within them, respectively, by means of tin "thimbles" or small tubes surrounding the orifices made for outlet and inlet.



Water-curtain for reducing temperature in sick-rooms, factories, etc.

A box suspended against the wall over the curtain and lined with zinc to prevent leakage may be utilized, if there is no running water in the room, and may, in addition, be filled with ice, which will serve to give a degree or more lower temperature than the city water-supply. A wash-boiler with faucet on the end will answer nicely for this purpose.

At the bottom of the cotton fabric is a tin trough (*cc*), in the center of which, at the bottom, are soldered eye screws, which, in turn, connect with an iron rod pushed through a hem taken in the lower part of the curtain or fabric. This enables the curtain to be drawn taut and hang directly down into the trough (*cc*) and prevents dripping from the sheet above to the floor.

The water-curtain is suspended from the ceiling by chains or rods (a clothesline answers very nicely), which, affixed to the ceiling, continue downward to the tube (*aa*) and thence down to the edge of the trough (*cc*), thus giving the necessary balance and stability to the whole scheme, as shown in *bb*.

The trough is set slightly at an incline to give the necessary runway for drainage purposes through the pipe marked *ee*, which may be allowed to run waste or be conducted back by a siphon effect to *dd* and there mix with the cold fresh water and be utilized over again.

At the point marked *f* an electric fan is placed directly at one end of the curtain, which serves to hasten the rapid evaporation of the water from the curtain by a continuous series of serpentine or wave-like movements imparted to the sheet its entire length; but in cases in which the fan cannot be employed, the same effect (a continuous lowering of the temperature) is obtained, but almost twice the length of time is required to reduce the temperature in the room to the same degree.

One of the advantages of this method is the fact that it will continue its work without further interference or manipulation during a hot night, in a noiseless manner, and requires no more attention than the simple turning off or on of the spigot or faucet on the wall connected with the rubber tube (*d*).

The curtain, by means of the water escaping by capillary attraction downward, is kept in a state of saturation to an excess, and it is, therefore, constantly soaked and dripping with water.

Formalin or similar agents may be conducted into the inlet (*d*) from a container placed somewhat higher up on the wall than the curtain, in such proportion as to mix with the water at a given percentage, and, in addition to the reduction of temperature, accomplish germicidal results.

The well-known natural law of the attraction of smaller bodies toward a larger mass is taken advantage of in the collection of dust in the air, which is held in place by the cohesive wet surface of the curtain. The fabric may be removed for washing purposes in a few moments' time after it has been covered with dust in the manner described, and a clean, duplicate fabric substituted.

No method, feature, or appliance has been patented in connection with curtain, and it may be freely utilized by individuals or hospitals for their respective needs.

It will be noticed that the whole system is very inexpensive, the tin speaking-tube costing but two cents a foot, the necessary trough five cents a square foot (constructed by any tinner), the cotton twill six cents a yard, and the rubber tubing eight cents a foot.

This opportunity is taken to thank my assistant, Dr. D. P. Bush, for interest shown and for valuable services rendered during the construction of curtain and while conducting the experiment.

1246 Eleventh Street.

THE TREATMENT OF GONORRHEA WITH REFERENCE TO THE QUESTION OF STERILITY*

B. C. CORBUS, M.D.

Instructor in Genito-Urinary Diseases, College of Physicians and Surgeons, Medical Department of the University of Illinois.

CHICAGO

In 1901 there were approximately 162,372 patients suffering from venereal disease in New York.[1] Although we have never had any investigation to compile statistics here in Chicago, I have no doubt that the number of venereal patients is equally great. In New York 15,969 cases of gonorrhea were reported, of which 1,941 were in women. The proportion of men to women is about 15 to 1; of these one-third were in women who were infected after their marriage.

While it does not seem possible to limit promiscuous sexual intercourse, it does lie within the bounds of possibility to limit the transmission of the disease by "bacillus-carriers" through a careful and systematic management of cases from the microscopic standpoint of the discharge.

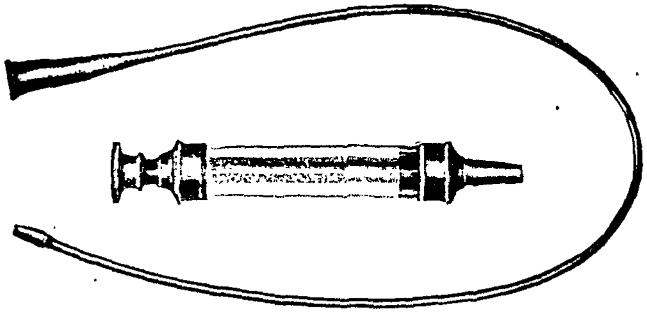


Fig. 1.—Guyon capillary syringe.

The gonococcus has its own peculiar characteristics which enable it to be differentiated from other organisms. It grows best on ascitic fluid agar and its macroscopic appearance is fairly characteristic. The colonies when grown twenty-four hours at 37 C., appear circular, resembling dewdrops, are grayish blue and transparent, slightly iridescent, and about 1 mm. in diameter. In gonorrheal pus the prevailing form of the diplococcus is the "coffee bean" or "roll" shape.

The gonococcus is particularly characterized by being found within the protoplasm of the pus cell and never in the nucleus. Although appearing in thick smears to be within the nucleus, the bacilli are in reality on top. This position is less frequent in the early stages, but it is the rule in the stage of excessive purulent inflammation. In the later stages there are fewer leucocytes and the cocci are found in the epithelial cells or often free in groups. In acute and chronic cases the cocci are often extracellular.

In recent gonorrheal infections of the genital mucosa, the microscopic demonstration of the gonococcus is not difficult. The many methods for staining the gonococcus have no advantage over Loeffler's methylene blue, because they are of no value in differentiating it from other organisms, as they all take the stain. By the addition of a little ammonia to Loeffler's methylene blue, the leucocytes, epithelial cells and cocci are all intensified and as a consequence the picture is made more vivid.

The only staining method which possesses any certain value for differential diagnosis of the gonococcus, however, is the Gram method. If the smears have been made evenly thin and have been properly stained, the *gonococcus in gonorrheal pus and in cultures is always completely and rapidly decolorized. In the same manner* they can be differentiated particularly from a number of cocci, including some diplococci, which occur under the normal[2] conditions in the male and female genital tract.

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* Portion of a paper read before the Chicago Medical Society, March 2, 1910.

[1] Med. News, 1901, lxxix, 962.

Nevertheless, *microscopic examination* in gonorrhea, especially in chronic cases in which a few suspicious cocci are found, is not always dependable. In such cases it may be necessary to culture the organism.

The most frequent cause of sterility in the male is *gonorrheal epididymitis.*

If *the epididymes are attacked by inflammation,* complete obliteration of the ducts not uncommonly results. It is immaterial from what cause the inflammation develops, the results are the same; all depends on the *degree and extent of the inflammation.* An injury to the epididymis, syphilis, tuberculosis, carcinoma and sarcoma may produce an occlusion, but these conditions are indeed rare in comparison to gonorrheal epididymitis, which, according to statistics,[3] occurs in 7 to 14 per cent. of all cases.

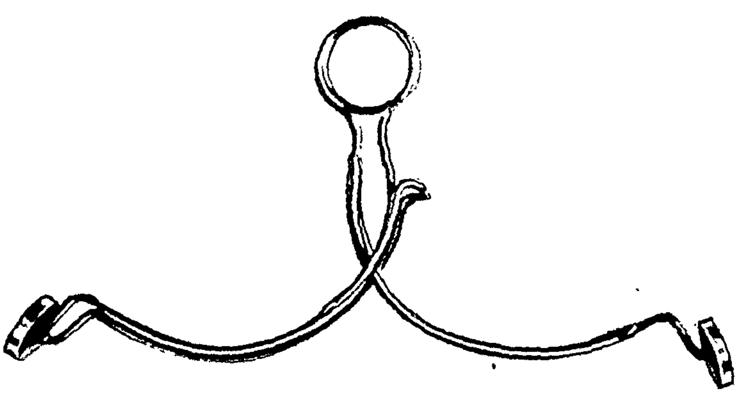

Fig. 2.—Urethral clamp.

ANTERIOR URETHRITIS

With the passing of the irrigation treatment for acute specific anterior urethritis, the *attending posterior urethritis* with its complications is fast diminishing. During the past three years I have treated about 200 cases of urethritis in private practice and the resulting involvement of the epididymes was less than 0.5 per cent. The management of the cases was as follows:

INSTRUMENTS AND MATERIALS

I. INSTRUMENTS

1. *Capillary Guyon syringe.*
2. Large glass syringe with blunt nozzle holding about 10 c.c.
3. Set of sounds or flexible bougies.
4. A suitable clamp for holding the meatus.

II. MATERIALS

Two per cent. stock bottle *albargin in dark-colored* bottle.

Four dark one-ounce bottles containing respectively 0.25 per cent., 0.5 per cent., 0.75 per cent., and 1 per cent. nitrate of silver.

Having satisfied myself that I have a *specific urethritis to deal with* I proceed as follows:

The patient is instructed to urinate in two glasses (this test is of no value unless the patient has held his urine for at least four hours). In a large majority of acute cases, if seen before the fifth day, the infection has not yet become posterior, as will be seen by the urine glasses, the first will be cloudy with specks, the second clear, showing that the case is one of a simple anterior urethritis.

If the cases are handled according to the following method, there will be no further trouble:

The patient is placed on his back (or if one prefers *to have him stand there is no objection, unless there is an extreme grade of inflammation*). Ten c.c. of a 2 per cent. solution of albargin heated to 104 F. are gently injected into the anterior urethra by means of the glass syringe. Pressure is made at the juncture of the anterior and posterior urethræ to keep any fluid from passing backward. This is especially important in cases of relaxed external sphincters. *This solution is held in the* anterior urethra three to four minutes, by means of a small clamp that gently holds the meatus together. After allowing the injection to flow gently out, a loose dressing is placed over the penis to allow for good drainage. *On no consideration is the patient allowed* to crowd cotton between the folds of the prepuce to check the discharge.

The patient is next given a hand injection, either 0.25 per cent. protargol, or 0.1 per cent. albargin, and instructed to use it four or five times a day, care always *being taken not to use any force and to make pressure at* the posterior end of the anterior urethra during the injection. For the high-grade local inflammation that is always present and which is exaggerated by the warm injection, the patient is instructed to immerse the penis *in a glass of hot water for fifteen minutes, two to four* times on the first day, always using great care to keep the water as hot as possible the whole time. This procedure will rapidly take out the inflammation and permit the continuance of the treatment.

On the second day the discharge is examined and *carefully noted, to see if the gonococcus is still present.* Occasionally, when the duration of the urethritis is under thirteen hours, one injection is sufficient to drive the gonococci out of the urethra. Whether they are present on the second day or not, however, I continue the treatment for four days; 2 per cent. albargin hot in the anterior urethra at the office and the hot immersions and injection at home. If for any reason on the second or third day there is the slightest suspicion of a hemorrhage, cold 2 per cent. albargin solution *is substituted* for the hot solution, and the patient is told *to reduce* his hand injections to one or two *times a day,* but to continue the hot immersions as previously.

On the third day the discharge is again examined and a careful search is made for the gonococcus. If cocci are absent, the same *treatment is continued* for another day (four days in succession); *on the other hand,* if they are still present, the treatment is continued until the organism is absent and has remained so for four successive days, great care being always taken to discontinue the 2 per cent. albargin entirely *if the hemorrhage* is in the *least persistent.* If the hemorrhage is at all severe, all *local* treatment within the urethra is suspended, but the suspension in hot water is continued.

We now assume one of the following: Either (1) that the gonococcus has disappeared entirely from the *urethra, or (2)* that it has invaded the deeper layers of the mucosa or glandular tissue and does not appear in the discharge.

Now, provided the organism has been absent for four successive days and the local *inflammation* has subsided, a 1 per cent. nitrate of silver solution is gently passed into the anterior urethra. With this solution in place the urethra is gently massaged, the same precaution always being used about constricting *the anterior* urethra at its junction with the posterior urethra. The

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[2] Kutscher Berl. klin. Wchnschr., 1909, xlvi, 2059.

[3] Finger: Blennorrhœ, Leipsic and Vienna, 1905, p. 309.

1 per cent. nitrate of silver acts as a harrow; it causes a large amount of desquamation and in so doing may dislodge any organisms that have invaded the deeper layers of the mucosa.

The patient is instructed to continue his hand injection for two days, at which time he presents himself for another microscopic examination. If on the second day after the 1 per cent. of silver injection, the gonococcus again makes its appearance, it is necessary to start from the beginning, treating this acute exacerbation as an acute attack, and to proceed all over again. On the other hand, if no organisms are present, a well-lubricated bougie (one that just fits into the meatus snugly) is passed the length of the anterior urethra, care being taken not to produce any traumatism. With this in place the urethra is gently massaged. This is followed by a 2 per cent. albargin injection cold.

The patient is then instructed to use his hand injection for several days longer, and at the end of which time, if there are no organisms present, he is given a rest for five days, being instructed to return at the end of the fifth day. If the microscopic examination of the discharge shows no gonococci at this time the patient is instructed to dring some beer; if this does not cause a return of the discharge in thirty-six to forty-eight hours, he can be considered well.

In all cases of simple anterior urethritis in which there are no complications, the patient is instructed to discontinue the use of alcoholic drinks for one month after his test drink, as they tend to aggravate a "post-gonorrheal catarrh." In a large percentage of cases when you have removed the cause (the gonococcus) all that is necessary is to keep the functions of the body active and the discharge will cease.

Astringents are to be emphatically condemned, as a discharge that persists in spite of careful dietetic and hygienic care is sure to contain cocci and suppression of the discharge only tends to lock the gonococci tighter within the urethral mucosa.

In a few exceptional cases, especially after a prolonged course of treatment, a catarrhal condition of Littré's glands which calls for astringent treatment may occur.

POSTERIOR URETHRITIS

Few patients with simple anterior urethritis, if seen early and treated in the above manner, acquire posterior involvement.

When the two-glass test shows an involvement of the posterior urethra, I proceed as follows (always having the patient empty his bladder before treatment): Depending on the severity of the symptoms, 0.25 to 0.75 per cent. nitrate of silver are passed into the posterior urethra, by means of the Guyon capillary syringe. If there is the slightest irritability and tenesmus, only the weakest solution is used; following this the anterior urethra is injected with hot 2 per cent. albargin, the same precaution being used not to let it pass posteriorly. The anterior treatment is continued daily with the same limitations as for acute anterior urethritis, but the posterior treatment is not resumed until the third day. Should the irritability and tenesmus increase in severity, all treatment, both anterior and posterior, are discontinued, and the patient is given a saline laxative, hot sitz baths and rectal suppositories containing the following:

℞.	gm.	
Extracti belladonnæ Extracti opii, āā	0|25	gr. iv
		or
Ichthyolis Iodoformi, āā	2|50	gr. xlv
Butyræ cocæ q. s.		

M. Fiant suppos. rect. No. X.
Sig.: Insert one every six hours.

On the third day, provided the acute posterior symptoms have all subsided, the prostate is gently massaged and 0.25 to 0.5 per cent. of nitrate of silver is given by the Guyon catheter, followed by the anterior treatment. No matter how slight the posterior infection may be, there is always a corresponding involvement of the prostate, and the posterior infection will not clear up unless the prostate receives its corresponding attention. In acute cases it is seldom necessary to use stronger solutions than 0.75 per cent. nitrate of silver posteriorly. When the urine clears in the second glass and the prostate shows no pus microscopically, a bougie is passed all the length of the urethra, but the 1 per cent. nitrate of silver is omitted in the posterior urethra. If this does not produce a recurrence, the beer test is applied. If the gonococci are still absent and the urine glasses clear, the patient can be considered well. In the event that the gonococci appear again, however, it is necessary to start as from the beginning.

In all cases of acute posterior urethritis it is advisable to put a good snug-fitting suspensory on the patient—not the ordinary suspensory that simply holds the scrotum together, but one that raises the testicles well up toward the pubes.

I have intentionally omitted all reference to the internal treatment and the management of complications, as space does not permit their discussion here.

For the management of acute infections of the epididymis, you are referred to the excellent works by Belfield, Hagner and others.

CONCLUSIONS

1. Specific urethritis is increasing in frequency.
2. More attention should be paid to its detailed diagnosis and treatment.
3. Methods of treatment should aim at the easiest and simplest way of combating the disease.
4. With this in view the spread of specific urethritis will be greatly lessened.

100 State Street.

A STUDY IN RENAL SENESCENCE*

JOSEPH WALSH, M.D.
PHILADELPHIA

In a study of the kidneys four years ago I thought I noticed a fact which I had never heard mentioned, namely, that as age advanced there was a thickening of the interstitial tissue at the apex or papillary end of the pyramids and that this thickening was reasonably uniform. Further study on one hundred and fifty kidneys from individuals of all ages dying from many different diseases (though the majority died from tuberculosis of the lungs) added confirmation. I then showed a number of unselected specimens, the identification of which was withheld, to Dr. McFarland, who was so successful in determining the ages of the patients by the criterion mentioned that I have thought it worth while to prepare the following notes for publication.

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* From the Laboratory of the Henry Phipps Institute; read before the Philadelphia Pathological Society, Feb. 24, 1910.

The condition is practically one for demonstration rather than for description, yet the specimens shown at the time of the reading of the paper might be described as follows: The specimen from the child one month old showed through a ⅔ lens the tubules at the apex of the pyramids practically in juxtaposition with so little interstitial tissue between them that it was practically invisible; in the 9-year old specimen there were one or two fine lines of interstitial tissue between the tubules; in the 27-year-old specimen three or four lines; in the 35-year-old specimen five or six; in the 69-year-old specimen eight to ten lines and in the 99-year-old specimen ten to twenty lines.

Moreover, the study revealed that this thickening of the interstitial tissue was not dependent on the accompanying pathologic condition of the kidney, but occurred apparently only as a result of age. All kinds of pathologic conditions were found in the one hundred and fifty kidneys studied, namely, cloudy swelling, acute parenchymatous nephritis, chronic parenchymatous nephritis, focal interstitial nephritis, the various kinds of general interstitial nephritis, amyloid degeneration, pyelonephritis, etc. It was found that pyelonephritis and hydronephrosis injured the pyramids and increased the interstitial tissue in them to such an extent as definitely to obscure the comparatively slight increase due to age; in these cases, therefore, the age could not be told from the appearance.

In addition it was found that a general or a marked focal interstitial condition which is commonly only studied and described from the appearances in the cortex affected also the pyramids and hence increased the interstitial condition at the apex of the pyramids so that the thickening at this point did not correspond exactly with the age. Comparison of many such kidneys, however, showed that it was not difficult to learn from the condition in the cortex how much of the thickening at the apex of the pyramids was to be attributed to the pathologic condition and how much to age. In other words though interstitial nephritis modifies the amount of interstitial thickening at the apex of the pyramids, this modification can be recognized and taken into account. In regard to the question which naturally arises as to how reliable is the differentiation of age from this thickening of the interstitial tissue, I would say that it is almost as reliable as the appearance of the face; though we can generally give a pretty good idea of the age of an individual by looking at him we are sometimes mistaken in middle life to the extent of ten or even fifteen years and in old age rarely even to the extent of twenty years.

In deciding the age of the individual from the thickening of the interstitial tissue at the apex of the pyramids the following precautions should be taken: First, the apex of the pyramid should be in view. Sometimes a cross-section of the kidney is made in such a way that we see a long stretch of pyramid but instead of one we are looking at two pyramids end to end; in other words, a specimen may be cut across two pyramids in such a way that the apical portion of one pyramid will run into the apical portion of the other so as to make the end of the specimen actually near the second cortex though the second cortex is not in view. Second, edema must be differentiated from thickening of the interstitial tissue. Third, the amount of interstitial tissue should be estimated, not from a single location, but from several fields of a ⅔ lens. Fourth, interstitial nephritis increases the amount of interstitial tissue at the apex of the pyramid and must be accounted for. Fifth, pyelonephritis and hydronephrosis obscure completely the thickening due to age.

SUMMARY

1. There is a gradual increase in the amount of interstitial tissue at the apex of the renal pyramids so uniform with advancing age that the age of the individual is evident from the amount of interstitial tissue found.

2. This relation of the amount of interstitial tissue to the age is lost in cases of pyelonephritis and hydronephrosis; and modified by interstitial nephritis, though this modification can be accounted for, so that the age remains evident.

732 Pine Street.

THE UNCINARIA AMERICANA IN GEORGIA

C. A. WELLS
ATHENS, GA.

Since the investigation of uncinariasis in the South by Dr. Stiles in 1902, a number of examinations have been made for this disease by the Georgia State Board of Health and individual investigators in Georgia. The information so obtained has established with fair degree of certainty the geographical distribution of uncinariasis in this state, but has furnished little positive knowledge of the extent to which the disease prevails. An investigation was begun in this laboratory a little more than a year ago which has led to approximately accurate conclusions on this and certain other phases of the hookworm question.

METHOD OF INVESTIGATION

For the purpose of this investigation the state was considered in two divisions, the northern and southern, the former representing that portion of the state lying north of and including the foothills, and the latter the remainder of the state. From these divisions counties eleven in all—were taken typical of different local areas. From the counties thus chosen groups were selected representative of that portion of the white population subject to hookworm, and then a complete microscopic examination was made of each whole group. The results so obtained are given in Table 1.

The groups referred to above are schools, the examination of which I was enabled to make through the kind cooperation of the principals in charge. In the northern division, Group 1 is a rural school in the mountainous section, and likewise Group 2 which, however, is situated farther west. Both are situated south of and adjoining the Blue Ridge. In these sections a heavy gravelly soil exists with occasional loamy and ferruginous areas. The winters, for this latitude, are rather severe. There is much rainfall during the summer seasons. Group 3 is a school situated in a small town in north central Georgia. Here is found in the main, a light sandy soil locally known as "gray land." Group 4 is a school in a town of about 4,000 inhabitants which has had for the past few years a partial system of sewerage and pavement. The town is situated in middle Georgia just north of the foothills. Group 5 is a rural school located in another section of middle Georgia. Here a light gravelly and sandy soil predominates. In the southern division, Group 1 is a rural school and Group 2 a school in a small town. Both are situated in counties adjoining the state of Florida. Group 3 is a school in a small town near the central part of the southern division. A sandy soil prevails in all three of these localities and the rainfall during the summer seasons is less than that of the mountainous districts of the northern division for the same season. The sanitary conditions prevailing in the different sections of the state represented by these groups, except Group 3 in the northern division, are approximately the same. In the small towns some sort of a surface closet system exists, while the country schools visited were not found to have so much as this to their credit.

In Table 1 the groups already discussed are arranged in order, 1, 2, 3, etc., and each group is subdivided into two classes, A and B. Class A includes examination of persons from 6 to 16 years of age, and Class B of persons from 17 to 26 years of age. The signs + and — signify positive and negative results of examinations for eggs of the uncinaria.

PERCENTAGE OF POPULATION INFECTED

From the data in Table 1 may be calculated the approximate percentage of hookworm infection in this state. The white population of the northern division exclusive of that of Columbus, Macon, Augusta, Athens and Atlanta as estimated from the United States census report is as shown in Table 2 and the white population of the southern division exclusive of that of Savannah is given under Table 3.

TABLE 1.—HOOKWORM INFECTION IN GROUPS INSPECTED

Group	Class A, Age 6-16 inclusive									Class B, Age 17-26 inclusive								
	Males			Females			M. and F.			Males			Females			M. and F.		
	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+	+	—	%+
NORTHERN DIVISION																		
1	5	5	50	6	13	32	11	18	38	0	2	0	0	1	0	0	3	0
2	11	12	48	11	25	31	22	37	37	2	11	15	3	12	20	5	23	18
3	5	1	85	4	2	67	9	3	75	15	28	35	11	38	22	26	66	28
4	19	53	26	5	0	—	24	53	31	1	4	20	0	0	0	1	4	20
5	5	4	55	0	0	0	5	4	55	4	6	40	2	0	—	6	6	50
Total	45	75	38	26	40	39	71	115	38	22	51	20	16	51	23	38	102	27
SOUTHERN DIVISION																		
1	8	0	—	4	0	—	12	0	—	24	18	57	8	9	47	32	27	54
2	14	8	64	22	11	67	36	19	65	7	2	78	2	0	—	9	2	82
3	7	4	63	11	5	64	18	9	67	4	0	—	9	2	50	6	2	75
Total	29	12	71	37	16	70	66	28	70	35	20	64	12	11	52	47	31	59

TABLE 2.—WHITE POPULATION OF NORTHERN GEORGIA, EXCLUSIVE OF CHIEF CITIES

Total	876,225
Class A, age 6-16 inclusive	311,264
Class B, age 17-26 inclusive	215,495

TABLE 3.—WHITE POPULATION OF SOUTHERN GEORGIA, EXCLUSIVE OF SAVANNAH

Total	223,268
Class A, age 6-16 inclusive	79,312
Class B, age 17-26 inclusive	54,909

From Table 1, 38 per cent. of Class A and 27 per cent. of Class B in the northern division, and 70 per cent. Class A with 59 per cent. of Class B in the southern division have uncinariasis. This gives a total for the state of 264,378; or exclusive of the six cities named above, approximately 24 per cent. of the total white population in Georgia have hookworm.

AGE PERIOD OF INFECTION

Infection was not found among children 5 years of age and under, and to no great extent among persons over 27 years of age, though it should be stated that a very small number of either of these classes was examined. The relative percentage of infection was found to increase with age up to about 16. It then remained almost constant to the age of 22. From this it decreased until at the age of 27 it became almost negligible.

SYMPTOMATOLOGY AND TREATMENT

For unavoidable reasons in many cases no record was kept of symptoms. From those which were recorded the following conclusions are drawn:

1. In a great many cases, particularly among the young, the symptoms heretofore ascribed to uncinariasis by competent investigators were very pronounced though they were little if at all in evidence in fully one-half of all cases examined.
2. Thymol is a positively effective anthelmintic if its administration is repeated often enough (in some cases it was found necessary to repeat the treatment as many as five times).
3. Patients almost always improve immediately after the worms have been expelled though a great many seem to be unable to recover fully from the effects of the disease.

RELATIVE INFECTION OF MALES AND FEMALES

In Table 1 the percentage infection of males and females is given, from which it appears that the two sexes are about equally subject to hookworm infection.

RELATION OF GROUND-ITCH TO THE DISEASE

This relation is brought out in Table 4, in which is given the calculation of those who have, and also of those who have not had ground-itch, but who were found infected with hookworm.

TABLE 4.—GROUND-ITCH AND HOOKWORM INFECTION

Ground-itch.	Per Cent. Hookworm Infection.
Not since 1902	11
Between 1904 and 1906	62
Since 1906	82
Not at all	8

In this table three things are indicated: (1) that the uncinaria can live longer than eight years, the longest period found being twelve years; (2) that Nature may eliminate the worms from the intestines in less than eight years, the shortest time found being a little more than two years; (3) that ground-itch, though the chief, is not the only mode of infection. In all three of these deductions it is assumed, of course, that the cases reported were true cases of ground-itch and represent hookworm infections, which may or may not be true, for there are certain cases of ground-itch, so-called, caused otherwise than by larvæ of hookworms. In the words of Dr. Stiles, "probably the term 'ground-itch' covers a multitude of sins."

It may be mentioned also that eggs of *Tænia nana* were found in 3 per cent. of all specimens examined.

SUMMARY

1. Uncinariasis is confined mainly to persons between 5 and 27 years of age.

2. The greatest infection occurs between the age of 6 and 16 inclusive.

3. Symptomatic diagnosis is unsatisfactory; thymol is an effective vermifuge in the treatment of hookworm; in some cases full recovery from the effects of the disease seems to be unattainable.

4. Males and females are infected approximately to the same extent.

5. Exclusive of the large towns, about 24 per cent. of the total white population in Georgia have uncinariasis.

6. Ground-itch is the chief but not the only mode of infection.

7. The uncinaria may live in the intestines from two to twelve years.

RECURRENT FURUNCULOSIS IN AN INFANT SHOWING AN UNUSUAL BLOOD PICTURE

MEDWIN LEALE, B.A., M.D.
NEW YORK

Having failed to find any similar case reported in the literature, I believe that the following will probably be of interest.

The case occurred in my private practice and the child first came under my care in September, 1908, and at that time the following history was obtained.

Mother's History.—The family history was excellent, there being no discoverable hereditary taint. The mother, an unusually robust woman in her thirties, with that nervous energy which so often accompanies an active mentality, toward the end of the eighth month of this her second pregnancy, suddenly developed eclampsia, having, according to her accoucheur, previously presented no untoward urinary findings. The labor was hastened by an instrumental delivery, and the mother was delivered of a well-developed though premature boy baby, weighing about six pounds.

Baby's History.—As the mother could not nurse the infant owing to deficient milk supply, the accoucheur secured a wet-nurse. As the nurse's milk did not agree with the child, after trying fresh milk formulas he was placed on a condensed milk modification. On this, I am told, he improved somewhat, but the food did not prove altogether satisfactory and the infant was placed on the first formula of the "Materna,"[1] which constituted his food until I saw him for the first time at three and a half months of age. At this time his weight was eight pounds. The following information was also elicited. When about eight weeks old, the baby had an attack of suppression of urine which was relieved by hot packs over the kidneys, and on Sept. 7, 1908, one month later, I am told, passed no urine for a period of thirty-six hours. The first few drops of urine passed after this contained blood. One week later, the infant had a similar attack. I could not secure any further accurate information in regard to the urinary findings.

Examination.—I saw the baby for the first time Sept. 20, 1908, when he was three and a half months old, and for the previous twenty-four hours had been fretful and restless with a temperature of 102 F. He had had a number of greenish lumpy and watery stools. I made the following physical examination: A poorly developed baby, weighing eight pounds, slightly marasmatic look, poor color, bony and other tissues soft. He does not notice even loud noises. The pupils react to light rather slowly. The baby does not follow even a strong light with his eyes. His sense of taste is normal. There is a slight tendency to snuffles. There is no skin eruption, and no glandular enlargement. The lungs are normal. The heart presents a roughening of the first sound over the pulmonary interspace, but there is no weakening of the second pulmonary sound. There is no dilatation of the right ventricle, and no evidences of cyanosis or of venous stasis. Abdomen is slightly distended, but there is no rigidity. The liver and spleen are impalpable. The superficial and other reflexes are rather sluggish.

Treatment.—The infant, after recovering from this enteric attack, was placed on gradually increasing and appropriate milk dilutions, so that two weeks later he had gained one and a quarter pounds, and showed corresponding improvement in his general condition. One week later, Oct. 19, 1908, a few pustules appeared on the neck and the chin, which were carefully expressed and dressed. The milk formula was gradually increased to fat 2.23 per cent., proteid 1.12 per cent., sugar 6 per cent. He was getting 7 feedings in 24 hours with 4½ ounces at each feeding. The amount at each feeding, the strength of the food, and the number of feedings were changed from time to time to meet the needs of the child, and on Dec. 14, 1908, his weight was 11 pounds 3½ ounces, a net gain in 2½ months of 3 pounds 3½ ounces.

Course of Disease.—On December 19 of the same year, the baby had another attack of furunculosis and on December 21, thinking that he might do better with a wet-nurse, I secured one who had been carefully watched in one of the maternity hospitals of this city, and after a careful personal examination of herself and her six weeks old baby, put him to the breast, with remarkably satisfactory results. With the exception of one or two slight colds in the head, barring the periods of fever and furunculosis, the baby did splendidly, so that between Dec. 22, 1908, and Feb. 22, 1909, he had gained 5 pounds 11 ounces (weight 16 pounds 7 ounces). On June 15, 1909, his first birthday, the baby's weight was 20 pounds 7 ounces, his height 28¾ inches, circumference of head 18⅜ inches, chest 18½ inches. He had 8 teeth, and his bony and other tissues were normal. His vision and hearing were normal.

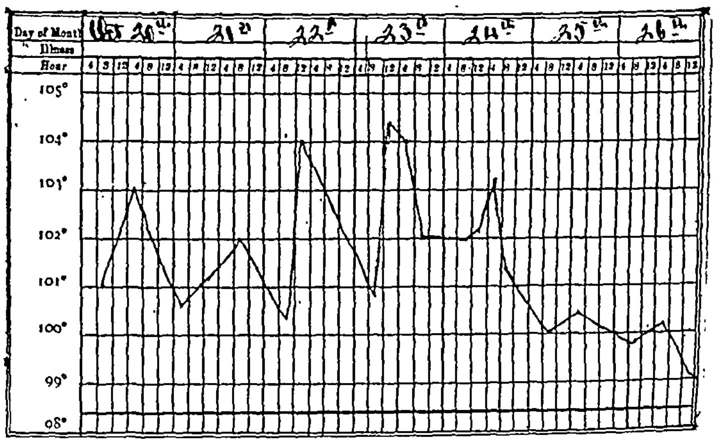

Chart 1.—Temperature curve during October, 1909, attack.

Description of Furunculosis Attacks.—During the period from the onset of the attacks of furunculosis, in October, 1908, the baby had persistent recurring attacks of furuncles accompanied with a rise of temperature, reaching from 102 to 104.6 F. This fever was usually of the irregularly remittent type, and lasted from 3 to 10 days; at one time the fever persisted for over three weeks (Charts 1 and 2). The fever reached its fastigium usually just prior to the ripening of the furuncles, which varied from 2 to 5 in number, and which were accompanied with considerable inflammatory infiltration of the surrounding tissues. Occasionally also an aphthous patch developed on the buccal mucous membrane, and this resulted in considerable necrosis. There was no tenderness of the legs, no abnormal changes at the epiphyses or of the periosteum. There was no sponginess of the gums, in fact, nothing to indicate scorbutus. Instructions were given to start the administration of orange juice after taking the child from the wet nurse, and this and the addition of barley and other cereal gruels to the fresh cow's milk were faithfully carried out. On only two or three occasions was there any marked gastrointestinal disturbance, and at no time was there any evidence of an ulcerative colitis. There was never any vomiting and rarely a diarrhea, the food in reduced quantity as a rule being well digested. During several of the attacks the baby suffered from marked prostration, presumably from sepsis, and the most careful stimulation was required.

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[1] The Materna is a glass graduate used in the home modification of milk for determining approximate percentages.

Blood Examination.—Repeated examinations of the blood failed to show the plasmodium of malaria, and the condition seemed to be uninfluenced by the administration of quinin bisulphate given in solution. There was at no time a marked anemia, the hemoglobin never being below 55 per cent., and the red blood corpuscles were always up to the minimum normal for that age. There was at no time a distinct leucocytosis, in fact the opposite condition, a leucopenia, was the rule. The unusual feature of the blood picture is the relative leucocyte count which on several examinations over a variable period of time remained very constant, showing an extreme relative lymphocytosis. The following relative leucocyte counts will serve as examples:

Oct. 25, 1909. Differential Count: Small lymphocytes, 65.8 per cent.; large lymphocytes, 32.2 per cent.; polynuclear neutrophils, 1.0 per cent.; eosinophils, 0.8 per cent.; basophils, 0.2 per cent.

Dec. 6, 1909. Differential Count: Small lymphocytes. 61.8 per cent.; large lymphocytes, 34 per cent.; polynuclear neutrophils, 1.0 per cent.; eosinophils, 2.8 per cent.; basophils, 0.4 per cent.

Jan. 12, 1910, the complete blood examination was as follows: Number of red blood corpuscles in 1 cm., 4,800,000; number of leucocytes in 1 cm., 3,000. Differential count: Small lymphocytes, 69.2 per cent.; large lymphocytes, 25.2 per cent.; polymorphonuclear neutrophils, 1.0 per cent.; eosinophils, 3.8 per cent.; basophils, 0.8 per cent. The amount of hemoglobin was 70 per cent. Color index was 0.73. The plasmodium of malaria could not be found on careful search. The red corpuscles were uniform, but somewhat small in size.

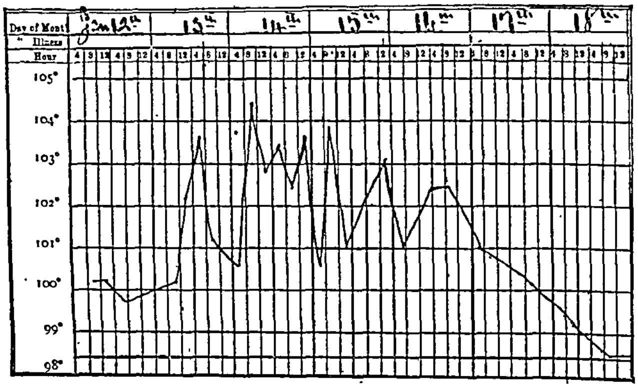

Chart 2.—Temperature curve during January, 1910, attack.

Urine.—The urinary findings on several occasions showed a heavy uric-acid deposit, and during the height of the fever on one or two occasions a faint trace of albumin was detected, but no other abnormal urinary conditions were found.

Micro-organisms.—Cultures from the pustules showed pure *Staphylococcus pyogenes aureus.*

Present Condition.—On Jan. 27, 1910, when the baby was 19½ months old, the following physical examination was made: A well-nourished, active though slightly pale-looking child, very responsive and easily interested, though somewhat nervous. He walks unaided, standing and sitting erect. His head measures 19 inches, chest 18⅞ inches, abdomen 18⅛ inches, and length 30 inches. His weight is 22 pounds, 7 ounces. His legs are straight. The anterior fontanelle is closed. The condition of all the bones is normal. He has 15 teeth, perfectly formed. His back is straight, and muscles are firm. The heart, lungs and abdomen are normal. There is no enlargement of the spleen or of the lymphatic glands, and no evidence of enlargement of thymus. Sensation, throat, eyes and ears normal.

Here, then, is the case of a baby who was born prematurely, who suffered from a marasmatic condition during the first few months of his existence, but who at one year of age and thereafter showed but slight if any departure from the normal in physical and mental development, but who was subject to repeated attacks of furunculosis, with accompanying fever and prostration all out of proportion to the clinical findings, and who also presented the unusual blood picture of an extreme lymphocytosis without other marked blood changes.

It is extremely difficult to account for this great proportion of lymphocytes. Lymphatic leukemia would be thought of, but the absence of a leukocytosis, and the absence of enlargement of the lymphatic glands and of the spleen, with the other clinical findings, would exclude this diagnosis. The periodicity of the fever coming on every few weeks would naturally suggest malaria, but repeated and most painstaking examinations of the blood by myself and several well-known clinical pathologists failed to find the plasmodia, and as has been stated there was no splenic enlargement.

The infant was never markedly anemic; there were no evidences of the "constitutio lymphatica"; at no time were there any symptoms of rachitis or scorbutus; and from the nature of its recurrency the infectious diseases may be excluded. There was nothing either in the history or the clinical findings to suggest specific disease. An enlarged thymus could not be detected.

In all probability, the fever is to be accounted for by the toxemia generated by the *Staphylococcus pyogenes aureus* during the attacks of furunculosis, but this does not satisfactorily account for the peculiar blood findings.

As every attention had been given to the feeding, the general hygiene of the infant, and the local treatment of the suppurative areas, without giving permanent relief from the recurrency of the attacks, an autogenous vaccine is being prepared at the bacteriologic laboratories of the College of Physicians and Surgeons, and careful injections of the vaccine will be made at intervals with the hope of establishing a partial or complete immunity to the staphylococci.

Since submitting this article for publication, during a period of two months, the little patient has had no return of the attacks, and his general health is excellent. The immunizing process was kept up over a period of six weeks, an injection of the vaccine being given at intervals of from five to ten days, in gradually ascending dosage. During this time he has shown no disagreeable symptoms, the vicious cycle of the attacks has been broken, and an immunity has been established. How long this immunity will last time alone will prove.

852 Lexington Avenue.

Therapeutic Disregard of the Laws of Gravity.—R. Blondel in an article recently reviewed in the *Gazette Médicale Belge*, March 17, mentions among other ways in which the attraction of gravitation is disregarded in medical measures, that patients generally put on an elastic stocking like an ordinary stocking, after they have left the bed and the blood has had a chance to settle in the limb. How few physicians, he remarks, think of advising the patient to put on the stocking before arising, and not until after the limb has been held vertically for a time to allow the blood to leave it, the expulsion of the blood being promoted by gentle kneading downward and the stocking being drawn on by another's hands if possible. Abdominal bands should also, he says, be applied while the patient reclines, the individual merely lifting the pelvis from the plane of the bed to permit the band to be passed beneath the body. If corsets were put on also in this way, much would be gained. He also warns that after operations the pelvis should not be lowered too abruptly from the Trendelenburg position.

ANIMAL EXPERIMENTATION IN RELATION TO PRACTICAL MEDICAL KNOWLEDGE OF THE CIRCULATION*

JOSEPH ERLANGER, M.D.
MADISON, WIS.

III. CIRCULATORY SYMPTOM-COMPLEXES AND THEIR TREATMENT

(Concluded from page 1774)

An attempt was made in Part II to make it clear that, whereas the attention of the ancients was attracted to certain symptoms, such as palpitation and syncope, owing to their lack of knowledge of the structure and functions of the heart and blood-vessels, such symptoms were not associated with specific diseases of the circulatory system.

CLINICAL CONCEPTS AND ANIMAL EXPERIMENTATION

It has been shown, furthermore, how, in the seventeenth and eighteenth centuries, when post-mortem observations made possible the building of a firm foundation for anatomy and after Harvey's demonstration of the circulation of the blood, the clinical concepts as we now know them began to appear. This fact in itself sufficed to indicate in a general way the dependence of our modern conceptions on the results of experiment. It might, however, be well to call attention to this dependence in somewhat greater detail.

Why valvular defects, both organic and relative, should alter the action of the circulation, and how, becomes perfectly evident when they are viewed in the light of facts demonstrated by experiment. If the lesion causes a stenosis or insufficiency of any valvular orifice, the knowledge of this fact suffices to account for practically all of the signs and symptoms of the disturbed function. Given, for example, narrowing of the mitral orifice, with a knowledge of the physiology of the circulation, the clinical picture is almost completely understood. The relation of the adventitious to the normal heart-sounds, the enlargement of the left auricle, the engorgement of the pulmonary circulation and its consequences, the hypertrophy of the right auricle and ventricle, the pulsation of the liver and of the veins of the neck, as well as other signs and symptoms, become perfectly clear and are seen to be part and parcel of one and the same thing.

The conception of relative or muscular insufficiency of the valvular orifices rests almost entirely on inferences from results of animal experiments. As long as the Hippocratic idea of the parenchymatous nature of the walls of the heart held sway, the possibility of a variability of the diameters of the cardiac orifices was entirely precluded. When, however, Harvey, Borelli and others[1] recognized that the movements of the heart resembled those of muscles, and after the property of tone in heart muscle had been discovered by Gaskell[2] the way was opened for the clinical conception of valvular insufficiency due to muscular weakness.

The hypertrophied heart, the *cor bovinum,* as a purely anatomic conception, was one of the earliest cardiac lesions to be described. Suggestions as to its causation were not, however, made until it was recognized that the heart, not the blood, did mechanical work and that the amount of work performed by the heart was subject to variation. Practically the only cause of hypertrophy of voluntary muscle is increased work; then why not of heart muscle, too? When, therefore, a hypertrophied heart is met, the physician, in order to discover the cause, looks for the factor that has increased the work of the heart. Physics teaches that work is proportional to the product of the pressure and the surface. "It is, therefore, not a matter of chance that the first to measure the blood-pressure in animals (Hales) was also the first to attempt the estimation of the work of the heart."[3] Since the surface area of the heart and the pressure against which it contracts both are subject to variation, it is to these factors that the clinician looks in order to account for hypertrophies of the heart. In this way many of the etiologic factors of cardiac hypertrophy have been brought to light. It has served to explain the hypertrophies associated with valvular lesions. It has likewise served to explain the cardiac hypertrophy of pulmonary emphysema, of arteriosclerosis, of chronic asphyxia (Hensen[4]), in which condition the blood-pressure is elevated, of many cases of nephritis in all of which the arterial blood-pressure is high, of plethora (which probably increases the work of the heart, not by increasing the blood-pressure, but rather by increasing the amount of blood in, and consequently the area of, the heart (Tigerstedt[5]), and of adhesive pericarditis.

The fact that the dilated heart has great difficulty in maintaining the circulation is likewise seen clearly when viewed from the standpoint of mechanical work.

The concept of the weak heart rests on the fact that the heart acts as a force-pump. The signs of failure of the pump, the fall of arterial pressure, engorgement of the veins, etc., are explained by the discovery of Harvey and its elaborations.

Paroxysmal tachycardia is probably merely a symptom of a number of affections of the heart. Through modern clinical methods, which are largely the outcome of work on animals, the behavior of the heart during the paroxysms has been discerned and at least one cause of the symptoms has been determined, namely, pressure on the vagi (see below.)[6]

The investigation of bradycardia has met with better success. There can be recognized by the application to the human being of methods employed in the laboratory: (1) complete bradycardia, that is, slowing of the whole heart and (2) partial bradycardia, by which is understood the slowing of certain parts of the heart below the mouths of the great veins. Clinical experience, in the light of facts accumulated in the laboratory, has led to the recognition of at least two causes of complete bradycardia, namely (a) direct or reflex stimulation of the cardio-inhibitory mechanisms by asphyxia, by arterial hypertension as in acute nephritis,[7] by increased intracranial tension,[8] by irritation of the gastro-intestinal canal and peritoneum;[9] and (b) slowing of the rate of discharge of the mechanism that sets the pace of the heart (Stannius, Gaskell)[10] through the depressing action of poisons or arteriosclerosis. Clinically these two types may be distinguished in man (Dehio) by means of a laboratory test which depends on the fact that atropin paralyzes the vagus terminals in the heart.

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* This paper is one of the series prepared for and reprinted by the Council on *Defense of Medical Research* of the American Medical Association for circulation among the public. Fourteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, the circulation of the blood, protozoan tropical diseases, etc.

1. See Part II of this article.
2. Gaskell: Jour. Physiol., 1880-82, iii, 53
3. Nagel: Handbuch der Physiologie, i, 866.
4. Quoted by Krehl, Pathologische Physiologie, 1907, p. 32.
5. Tigerstedt: Skand. Arch. f. Physiol., iv, 41.
6. Hoover: In Osler's *Modern Medicine.*
7. Based on Marey's law, which in turn is based on animal experiments. See La circulation du sang, Paris, 1881, p. 321.
8. Cushing: Am. Jour. Med. Sc., 1903, 1017.
9. Based on experiments by Goltz: Virchows Arch. f. path. Anat., 1863, xxvi, 10.
10. Gaskell: Experiments described in Phil. Tr., London, 1882, p 993.

Animal experiments (Stannius, Gaskell,[11] and others) have brought to light, and have determined the causes of, the type of bradycardia termed incomplete; and the applicability of this work to the condition (Stokes-Adams disease, etc.) as seen in man has been demonstrate by animal experimenters (Chauveau, His, Erlanger,[12] etc.) employing in the clinic the methods of the laboratory. These, by showing that the most common form of incomplete bradycardia is atrioventricular heart-block, have very recently served to elucidate a clinical picture that has puzzled the medical world ever since it was first described some seventy years ago.

It is almost too early to predict the outcome of the efforts now being made toward a better understanding of the cardiac arrhythmias. That they have opened a new era in the detection and analysis of cardiac disease is perhaps all that can now be affirmed. However that may be, the result up to date has been that through the clinical application by Wenckebach,[13] MacKenzie,[14] Hering and others, of facts revealed in the laboratory by Marey, Gaskell, Engelmann, Hering and others, heart irregularities such as extrasystoles, allorrhythmia, the absolutely irregular pulse, etc., which heretofore have had no significance whatever, now stand for specific disturbances of the cardiac motor mechanism.

Reference has already been made to the part animal experimentation and experimenters have played in calling the attention of clinicians to the mechanism that comes into play when, as in arteriosclerosis, the arteries become inelastic.[15]

Arterial aneurism was recognized in man by the animal experimenter, Galen, and attempts at treatment were made by him. Just what part animal experimentation played in the development of this phase of the subject cannot be determined. However that may be, many signs and symptoms of great significance in the diagnosis of aneurism have since come to the clinician through, or have been rendered clear by, experiments on animals or animal experimenters. Harvey, for example, first called attention to the changes of the pulse. Pressure changes in the arteries have also been detected and for their recognition Williamson finds that "the sphygmomanometer is much more sensitive than the finger."[16] The pupillary effects of aortic aneurism are explained by experiments on the cervical sympathetic, some of which were performed as early as 1727,[17] and by local changes in blood-pressure.[18]

The localization of arterial and of most venous emboli from dislodged thrombi is explained perfectly by the circulation. And experimentation has served to throw light on many of the problems connected with the subject of thrombosis. These experiments have demonstrated that slowing of the blood-system *per se* does not cause clotting, although it has been shown by deduction from experiments on animals when the necessary factors are present, decreased velocity plays an important part in thrombosis.[19]

ANIMAL EXPERIMENTATION AND THE TREATMENT OF CARDIOVASCULAR DISEASE

To animal experimentation must also be attributed many of the most valuable suggestions as to the treatment of cardiovascular disease. It will, however, be possible to call attention to only a few instances of this most practical phase of the subject.

It is self-evident that with the discovery of the circulation, and only after the elucidation of the part played by the several mechanisms concerned in its maintenance, the rational treatment of the diseases of the circulation by mechanical means became possible.

Then it became possible to appreciate why patients suffering from "delinquium animi or swooning" should be placed in the recumbent position rather than "in an easy erect posture" as suggested by Paul of Ægina and why other practices, some of which are mentioned in Part II, were to be eliminated as irrational.

Bleeding, than which no form of treatment has passed through as many vicissitudes, illustrates how fruitless may be the results of uncontrolled speculation in medicine, the vacillation "in the practice of this therapeutic measure depending intimately on the prevailing views on blood and juices, on fever and inflammation, finally on life itself."[20] To-day venesection in diseases of the circulation seems to be indicated in but a single condition which may, however, appear in almost any of the symptom-complexes: "At any stage in a valvular lesion or in hypertrophy and dilatation of the heart . . . acute cardiac insufficiency may arise . . It is the one condition in which a venesection is advantageous."[21] Bleeding, then, is indicated only when it is necessary temporarily to relieve the weakened or dilated heart of the strain under which it is working. The mechanical indication and the mechanical action of bleeding both have been made clear through the discovery of the circulation and the part the heart plays in its maintenance. We no longer hear of bleeding practiced for its "derivatory" and "revulsive" actions.

More is heard to-day of a treatment which is just the converse of venesection, although it is practiced in many conditions to accomplish the very objects that were sought in blood-letting. The use of transfusion as a therapeutic measure was suggested in mythical times as a means of restoring youth. "An experiment which had hitherto only been made in animals,[22] transfusion was first put into practice by Cardanus in the fifteenth century. The attempt did not succeed, however, because, when artery was united to artery, the direction of flow was beyond the control of the surgeon. With the discovery of the circulation, the mechanical requirements of transfusion became clear.[23] Within less than forty years Lower succeeded in transfusing animals by passing the blood from an artery into a vein. And one year later Denis and King, working independently, successfully transfused blood from a lamb into man. The time was not, however, ripe for the practice of transfusion as a therapeutic measure. Unforeseen difficulties arose such as intravascular clotting, clotting at the point of union, and hemolysis. One by one, however, and almost exclusively through animal experimentation, these difficulties were cleared up and then eliminated. The successful efforts to remove what now appears to be the last great difficulty, namely, clotting at the point of union, are fresh in the minds of all. Through the use of a method brought to light by animal experiments (Queirolo, Crile);[22] of uniting blood-vessels with a tube in such a way that the blood does not come into contact with any foreign surface, or through the use of vessel suture as developed by the experiments of Carrel,[22] clotting is no longer to be feared.

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[11] Gaskell: *Jour. Physiol.*, *1883, iv, 61.*

[12] For the literature see Jour. Exper. Med., 1906, viii, 8.

[13] Wenckebach: Die Arrhythmia als Ausdruck bestimmter Functions-Störungen des Herzens, Leipsic, 1903.

[14] MacKenzie: Brit. Med. Jour., March and April, 1905.

[15] See Part II of this article.

[16] Quoted by Osler: Modern Medicine.

[17] Petit (1727) and Biffi (1846): Quoted by Schäfer, Text-Book of Physiology, ii, 618.

[18] Experiments of Wall and Walker; Quoted by Osler: Modern Medicine.

[19] *Baumgarten and Rizor, and von Recklinghausen*; Quoted by Blumer: Osler's Modern Medicine, p. 505.

[20] Bauer: Geschichte der Aderlässe, München., 1870.

[21] Osler and Gibson: Osler's Modern Medicine, p. 261.

[22] Crile: *Hemorrhage and Transfusion*, *1909.*

[23] I here follow the account given in Neuburger and Pagel: Handbuch der Geschichte der Medizin, iii, 87.

Transfusion of blood is used at the present time, however, only as a means of last resort. In most cases the infusion of a salt-solution into the blood vessels accomplishes the same end. The use of this therapeutic measure was suggested by Goltz when he called attention to the fact that the danger of sudden large hemorrhages depends on the emptiness of the heart, which, in that state, cannot do its work efficiently.[24] Then, after experiments on animals by Cohnheim (1869) and by Kronecker and Lauder (1879) had demonstrated that the injection of an aqueous solution of sodium chlorid may save the life of an animal which has certainly sustained an otherwise fatal hemorrhage, the measure was tried in surgical and obstetrical practice with the life-saving results that are familiar to all.[25]

Attention should here be called to the fact that transfusion and infusion experiments represent the first attempts at intravascular medication, a measure that was thereafter extensively employed in the laboratory but which has only recently come into vogue in the practice of medicine.[26]

Under the caption of mechanical methods of treating cardiovascular disease may also be included resuscitation by means of massage of the heart of subjects in whom the heart has stopped. In the ultimate analysis this method of treatment rests on the fact that the heart acts as a force-pump and that the pumping action of the heart muscle can be replaced for a time by that of the hand of the operator. More specifically, however, direct massage of the heart was first practiced by Schiff, who by this method succeeded in reviving dogs that had been killed with chloroform (1874). The measure was tried in the clinic six years later.[27]

The drug treatment of diseases of the circulation has been incalculably furthered by means of experiments on animals, while many of our most useful drugs have been discovered in experiments which were based on a knowledge of the physiology of the circulation.

The medicinal properties of digitalis, the most valuable of heart remedies, were known to the laity and the drug was used by the medical profession long before it was investigated in the laboratory. "The celebrated work of Withering on digitalis, published in 1785, shows," however, "that many deaths were undoubtedly due to the use of digitalis. Indeed, at that time and for half a century thereafter the action of digitalis on the heart and blood vessels was very imperfectly understood."[28] Traube's experiments and clinical observations on the action of digitalis did much to increase its use in disease.[29] Without going into this subject in any greater detail, the dependence of the physician on practical facts brought to light by means of animal experimentation may be shown merely by giving, in the words of one of the greatest of living clinicians, the main contraindications to the use of digitalis: "It may be said broadly to be contraindicated in all forms of heart disease without symptoms of muscle weakness" and "in states of high arterial tension . . . . . ."[30] The physiologic basis of these physiologic contraindications is so clear as to require no comment whatever.

In the choice of a heart remedy the physician has likewise to be guided by animal experiments. Both digitalis and strophanthin, for example, "act on the heart and on the blood-vessels, but in different degrees, and these differences alone determine whether one or the other shall be used in a given condition. Such differences cannot be determined except by means of animal experiments.[28]

The use of atropin in cases of overaction of the vagus mechanism is likewise based entirely on experiments on animals.

All of the drugs used as vasodilators, such as nitroglycerin and amyl nitrite, have been discovered by animal experiments and the indications for their use in cardiovascular disease would be meaningless in the absence of facts brought to light through animal experimentation.[28] Thus, the nitrites were introduced into therapeutics by the animal experimenter, Brunton, "who advised their use in angina pectoris to relieve spasm of the arteries." "Besides, in angina pectoris the nitrites may be used in any condition in which it is supposed the arterial tension may be lowered with benefit to the economy," as in certain cases of hypertension, or in combination with digitalis when, in cases of failing heart, the vasoconstrictor action of the latter might embarrass the already overtaxed heart.[31]

The vasoconstrictor adrenalin, one of the most valuable of recently discovered drugs, was brought to light through animal experimentation.[32] Indeed this statement is true of other drugs, too numerous to be mentioned here.

Animal experimentation on the circulation has also proved of value in the standardization of cardiovascular remedies. It is by that method alone that the physiologic activity of digitalis and strophanthus preparations, for example, can be determined, it is by that method alone that the physician can be supplied with digitalis and strophanthus preparations which will be of uniform strength and on which he can positively rely.[33]

The treatment of surgical diseases of the heart has been incalculably furthered—indeed this phase of medicine practically has been opened—by the experimental development of methods of opening the thorax under a negative[34] or a positive[35] pressure. Nor should we lose sight of the fact that both of these methods have as their foundation the animal experiments of Lower and of Haller, which were the means of laying down the first principles of the mechanics of respiration.[36]

THE WIDE INFLUENCE OF THE DISCOVERY OF THE CIRCULATION

Physicians should be reminded of the fact that the discovery of the circulation has benefited not only the specialist in diseases of the circulation; it has made itself felt in practically every branch of physiology and through these branches in practically every branch of medicine. To give but a single case in point: The knowledge of the circulation as acquired through animal experimentation led physiologists to study function in isolated organs kept alive by means of an artificial circulation. Using this method von Schröder, for example, determined the role of the kidneys in the process of urea formation and elimination.[37] These experiments, by placing the treatment of diseases of the kidney on a rational basis, have been of incalculable value to the clinician.

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[24] Quoted by Neuburger and Pagel: Handbuch der Geschichte der Medizin, iii, 92.

[25] Von Ott: Virchows Arch. f. path. Anat., p. 114.

[26] Liebreich: Therap. Monatsh., 1901, xv, 551.

[27] Metcalf: Boston Med. and Surg. Jour., 1909, clxi, 9.

[28] Hatcher: Pub. Med. Soc. State of New York, 1909.

[29] Ziemssen: Handbuch der speciellen Pathologie, etc., 1879, vi.

[30] Osler and Gibson: Modern Medicine, p. 261.

[31] Cushny: Text-Book of Pharmacology and Therapeutics, 1906.

[32] Oliver and Schaefer: Jour. [illegible] 1895, xviii, 230.

[33] Edmunds, Charles Wallis: [illegible] of Cardiac Remedies, THE JOURNAL A. M. A., [illegible] 1744.

[34] München. med. Wchnschr., 1906, liii, 1.

[35] Deutsch. med. Wchnschr., 1906, p. 534.

[36] Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 341 and 351.

THE LYMPHATIC SYSTEM

The lymphatic system, as tributary to the circulatory system, should perhaps receive a word of notice here. Briefly, then, it may be said that in this connection the physician owes everything to animal experimentation, since the lymphatics were discovered by Aselli (1622) in an experiment on a living animal.[38]

And, it may furthermore be added, one of the chief practical uses to which the lymphatics are put by the physician, namely, the hypodermic administration of drugs, suggested itself to Wood in 1855 through contemplation of an animal experiment performed by Müller.[39]

148 West Gorham Street.

CAN STAMMERING BE TREATED SUCCESSFULLY THROUGH THE AGENCY OF THE PUBLIC SCHOOL?

ELMER L. KENYON, A.B., M.D.
CHICAGO

The official recognition by a department of a large American municipality of stammering as a public problem, is fraught with too great possibilities to go unheeded. Constituting as it does an initiatory effort in the United States, it is more than likely, if correctly taken and successful in its results, to awaken a countrywide movement of untold advantage to an unfortunate class of sufferers. The schools very naturally have been first to realize this problem, as they have before been the first to realize other problems concerning abnormalities in children. The educator not only comes into contact with the stammering child, but his professional attitude demands recognition of his disorder; for hindrances to developmental progress of whatsoever character are, from his point of view, to be removed, and the child graduated into the mature world unburdened with recoverable abnormalities. But since stammering children have always been in the schools, it is to the great credit of the Chicago educators that they have sought to give concrete, remediable form to this important situation.

A COMMUNITY PROBLEM

And yet the problem should, I think, be considered a community rather than a school problem. The demands for the treatment of stammering are peculiar in themselves, and do not readily fit into the ordinary school régime. The problem should be considered a school problem only in so far as the schools can be shown to be best adapted for its handling. In other words, the responsibilty of the public must not be considered to end with the capability or incapability of the schools in the matter, but calls for the creation of whatever machinery may be necessary for the treatment of the disorder. Since, however, the machinery of the schools is everywhere in operation, and since the stammering children should in the natural course of their lives be in the schools, it is desirable to utilize them, if possible, for this additional service.

The successful treatment of stammering is a specific problem involving certain requirements regardless of where or under what circumstances the stammerer is treated. He is not a normal individual, and his abnormality partakes of a multitude of variations. The instrument which is to remold the delicate mental and physical activities of a stammering child, suffering from a disorder often so intrinsically a part of the child's mental life, and one so elusive and fitful as is stammering, must be carefully considered and delicately adjusted. And this is all the more important because of the danger, not merely of doing no good, but actually, by ill-considered methods, of doing positive harm. The problem is, therefore, to be taken seriously.

The disorder is one of child development. The still young and growing boy or girl, usually between four and eight years of age, already having acquired the beginnings of speech in a normal manner, starts mysteriously a slight occasional hesitation in his utterance, and then step by step the disorder becomes fully developed. The links which connect the heretofore normally speaking child with these first significant hesitations in speech constitute the key to the understanding of the disorder. Any community effort at treating stammering which does not lay stress on this beginning period would fail in its greatest opportunity. This aspect of the problem will be spoken of again.

Each case requires study to determine whether physical abnormalities capable of interfering with successful training exist. Here enter questions of general health and of abnormalities of the peripheral speech mechanism, whether in nose, throat or chest. Each case demands also consideration of the nervous and mental mechanisms, as well as of environmental conditions, for they also may have a most important bearing on recovery. These are all medical, psychologic and sociologic problems, necessarily to be handled by the physician and psychologist.

CLASSES OF STAMMERERS

Before discussing the requirements for success in the actual work of training stammerers let us realize that varying grades of severity of the disorder, varying degrees of firmness of its fixation in the mental life of the individual and varying degrees of susceptibility to training, exist. A certain minority are destined without skilled aid to acquire relatively smooth speech while still in childhood or in early youth; another proportion are capable of self-recovery early in adult life. Having eliminated these cases one is confronted with the great majority of stammerers, those who are destined, if untreated, to undergo a nearly or quite complete life-struggle with the disorder. For certain reasons the children who are capable in the long run of self-recovery should themselves be carefully treated, first, because training alone can select with certainty those that are really more easily recoverable; and, second, because the baneful hindrance to normal child development produced by stammering demands to be removed at the earliest possible moment. The permanent eradication of stammering even in the easier cases is hard enough. And any system of treatment of the whole number of stammerers should be based on the needs of the great majority of more severe cases, for the lighter ones will fall readily into such a system; whereas if plans are formed from the standpoint of the lighter cases even these may not be adequately reached, while the great mass of the stammerers will not merely be not benefited, but more probably will actually be harmed.

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[37] Von Schröder: Arch. f. exper. Path. u. Pharmakol., 1882, xv, 364; and 1885, xix, 373.

[38] Neuburger and Pagel: Handbuch der Geschichte der Medizin, ii, 336.

[39] Wood: A New Method of Introducing Medicines into the System, Month. Jour. Med., 1855, xx, 183.

QUALIFICATIONS OF TEACHERS

As to the demands of training itself, the direct work of guiding the stammerer out of his spasm-wracked utterance into a smooth speech—so far from being easy, is in the majority of cases extremely difficult. Consequently the teacher for this duty must be more carefully selected than for the ordinary work of teaching. She must be thoroughly capable, must be carefully trained, unusually enthusiastic, and possess unlimited patience. And the oversight of her work by those capable of understanding all its difficulties must be more frequent and painstaking than that for ordinary teaching. Few teachers would for long keep up their enthusiasm in work which makes such exactions, or be able to meet the inevitable difficulties, unless steadied, encouraged and assisted by one having a broader knowledge and deeper insight than most of them can hope to attain in this work. And the need of care in the selection of teachers is doubly emphasized when one approaches the practical and varied psychologic insight involved in the inculcation of self-confidence, of courage, of persistence, and the firmness in self-control on which success very largely depends.

MANAGEMENT

But all of these necessities having to do with the training of the stammerer are attainable in the public schools. There still remains a difficulty, however, not so easy to satisfy. Educated self-control, persistent, firm, habit-creating, is the key-note to success in the treatment of stammering. Bearing in mind that but one-fourth, or, at most, one-third of the child's waking hours are spent in the school room, and bearing in mind that self-control in a child under, let us say, thirteen years, especially if it be difficult self-control, is proportioned to the direct watchfulness exercised over him, one cannot but realize the great difficulty of uprooting this deeply seated disorder in the schools. Think of the difficulty under similar circumstances of causing a right-handed child to become by training left-handed, and you have a conception of the difficulties involved. The uncontrolled periods would be apt to serve to offset effectually the gains of the controlled periods. It is indeed a most serious question whether under conditions in which almost continuous discipline seems to be of vital importance, discipline during one-third of the time can be made to suffice. In the lightest cases the pupils would be benefited and eventually would recover; some of the moderate ones would probably succeed; but hope for success with the great mass of stammerers would, I think, hardly be warranted.

To overcome this serious drawback three possible things may be done.

1. Treatment may be extended over an unusually long period.
2. Parents may be systematically educated to enforce control intelligently at home.
3. A residence where the severely affected pupils might be housed day and night and kept continuously under observation could be created.

Indeed, it seems desirable that all of these expedients should play a part in the system. The relative ease with which long continued training could be secured is one of the great advantages of treatment in the schools. And while the cooperation of parents of a sufficiently intelligent character would be lacking in a large percentage of cases, yet this possibility in the system is deserving of the utmost emphasis. A systematic plan for the education of parents in the handling of their stammering children at home should be one of the prominent features of the method. Incidentally such cooperation is capable of saving a large sum annually to the community which attempts the public treatment of stammering.

SEGREGATION

Equally important is a home for the continuous residence of selected pupils. Carry out a plan of purely school treatment as rigidly as you may, yet many stammerers (I fear a large percentage) will prove to be incurable by it. Long lapses in self-control—from Fridays until Mondays, for example—will prevent success in many; weakness of will, extreme sensitiveness, unusual excitability, other abnormal nervous states, severity of manifestation in individuals, deficiencies of home environment, and especially the youthful age of the stammerer, will all play a part in producing failures. Such pupils demand the continuous molding influence of leaders capable of inspiring attention and compliance, and of skilled trainers capable of meeting every individual difficulty. There is no way, so far as I am able to forsee, to fully meet the demand of the problem without this continuous residence adjunct. The child would pass back and forth between the residence to the classroom and *vice versa*, instead of between the school and his home. Let it be realized that in case the problem of treating stammering were to be approached by any community without considering the public schools as a means for that purpose, the first necessity would be such a residential institution as I have mentioned. Thus, through the utilization of the schools, and the employment of such a residential adjunct, the whole expense of treating the disorder would be placed at the lowest possible point. From the point of view of government bookkeeping it seems hardly proper to charge up the expense of this especial institution to the school fund, but more properly it might be charged to an especial fund created for the purpose.

Successful handling of the problem of the stammerer in the public schools, then, seems feasible and desirable. Success will depend on the full grasp of the difficult nature of the problem. It will involve not only adequate instruction and training by selected teachers, but also full cooperation and direction by skilled physicians and psychologists, adequate supervision, and the institution of certain adjuncts to the regular school machinery, particularly the education of parents and a continuous residental home for selected cases.

UTILIZATION BY THE SCHOOLS

The utilization of the schools moreover, possesses certain inherent advantages. The first and most important of these is the possible reception of stammerers almost at the very beginning of the disorder. The stammering child under such a system needs not to await the attainment of usual school age before presentation at school, but with the enlightenment of parents may be presented whenever hesitation in speech becomes apparent. After the first few years every stammerer would be seen when he first entered school, and, as the years went on, a larger and larger proportion would be seen at a very early period after the inception of the disorder. The possibility and practical advantage at getting at the inciting causes would be unusual. And it is fair to presume that in the majority of cases incipient stammering could actually be arrested before the habit had become firmly fixed in the mental life of the child. Consider the saving in money, in effort, in character, in individual education, in mental suffering, and in successful lives, and such a possibility becomes of extreme importance.

Another advantage in the utilization of the schools for the public treatment of stammering would lie in the enevitable reception of nearly all stammerers, for nearly all children go to the public schools. And, also, it would lie in the permanence of the hold the system would have in each case. Only those who know the dogged tenacity of this disorder can realize the importance of such long-continued watchfulness and control.

The following suggestions are offered rather to open up the question of certain detailed methods which might be employed than as settled opinions, and they have reference in part to beginning efforts, when, as is the case in the Chicago schools, funds are apt to be inadequate.

A TENTATIVE PLAN

Scattered through the grades there would naturally be found a considerable number of fully developed stammerers offering more or less serious individual difficulties. In the practical attempt at the start to get at so extensive a problem these older cases might be passed over and the facilities available concentrated on the few lowest grades from kindergarten up. Having approached the problem through the incipient cases the full development of a system for all the stammerers could be made to accord with the success or failure in arresting the disorder in those already treated. The young stammerers who failed to respond to the more general measures first adopted would be taken one by one and together made the occasion of further steps in the development of the system. I am strongly disposed to emphasize treatment of the very beginners, to stand or fall, as it were, on the ability of a proper system to head off and to arrest a still incipient disorder. To this end the stammerers, as has been said, could be brought into the classes, so far as possible, before the regular school age. Especial attention could then be given to the study of exciting causes, and the treatment carried out, as far as possible, from that point of view.

In so far as practicable it would seem best to bring these beginning stammerers together from a number of schools into classes composed wholly of stammerers. Thus the most favorable conditions could be secured, and economy of time and expense encouraged. How the problem could be worked out with a few beginning stammerers in each school, in case it were impracticable to unite the cases from several schools, is hard to say.

If the grade teachers were capable of instituting general vocal training, including instruction in breathing, in chest control and in clearness of enunciation, perhaps with musical adjuncts, their cooperation with the especial stammering teachers could be utilized to advantage, for they, under those circumstances, could keep intelligent watch over the stammerers during the entire school period. But the plan of segregation, with the continuous care of a small class by especially trained stammering teachers seems much more likely to succeed.

The following suggestion is mentioned as a possible means of overcoming a practical difficulty connected with segregation. Let the plan of treating the stammerers by the schools be put forward at first, not as a universal proposal, but as an especial opportunity to be taken advantage of or not as the parents elect. Then let centralized schools be chosen for carrying on the work in the best and most economical manner possible. In this way there would be provided the needed opportunity to work out and prove a successful plan. Ultimately, as the public became convinced and funds became available, new centers could be created and finally all children provided for.

CONCLUSION

A practical degree of success in the treatment of stammering in the public schools seems possible, and yet one approaches the problem with profound respect. To a certain extent the road to success must be created through experience. With the determination to meet, as far as possible, the conditions of success, however exacting, the outcome must at any rate be as successful as the intrinsic conditions permit, and that degree of success would, I believe, be gratifying.

It means very much in possibility that this proposed plan for the public treatment of stammering should be studied and tried out. It means so much that failure would be a serious calamity. The wisest plan, from every point of view, as it seems to me, would be to concentrate the beginning efforts on a relatively small number of cases, to work out plans with great care, and to advance the system only in the light of painstaking trial and observation. The whole country would be the gainer from such an effort, and Chicago might well be proud to have made it. It could not but result in added knowledge which would aid greatly in the final solution of this difficult community problem.

34 Washington Street.

PAROXYSMAL TACHYCARDIA*

HERBERT M. RICH, M.D.
DETROIT

Variations of the rhythm of the heart-beat occur in many pathologic conditions and are frequently seen in medical practice. In recent years a great impulse has been given to the study of these phenomena. Certain clinical types have been differentiated. Among these is a condition now generally known as paroxysmal tachycardia. At first quite widely and loosely applied to periodic attacks of rapid and irregular rhythm, it has more lately been confined to those cases of periodic tachycardia in which the heart attains a rate of 200 or more within a short time following the beginning of the attack. The clinical picture is one simply of tachycardia, it being very unusual for any irregularity of rhythm to occur. An attack of this kind is, of course, always alarming, and it is extremely important that its nature be recognized in order that suitable treatment may be instituted.

The unsatisfactory accounts of this disease in most text-books and the importance of its recognition are my reasons for considering the subject. For example, it can easily be imagined with what solicitude I watched the patient in the following case through the first attack which I saw.

History.—M. C., aged 29, a nurse-maid, was first seen in December, 1907, complaining of headache, dyspnea and dysmenorrhea. Patient had had typhoid fever at 14; several attacks of tonsillitis and several attacks of acute arthritis. In 1904 she first noticed dyspnea. I found a mitral stenosis, early stage, when she first came to me. The murmur has at times assumed a musical character. In 1902 the patient was operated on, having a resection of an ovary. Later an abscess opened, and still later a ventral hernia closed up. In April, 1909, she had a complete hysterectomy. During the time I have had the patient under observation she has had numerous attacks of incompensation of her valvular lesion. These have all ended favorably with rest and strophanthus.

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* Read before the Wayne County Medical Society at Detroit, Mich., February, 1910.

Examination.—On Oct. 9, 1908, she came to my office. When I attempted to count her pulse at the wrist, I was quite unable to do so. Hastily putting the patient on a couch, I counted the apex-beats with a stethoscope, and found the rate to be 220, and perfectly regular. Patient said that just as she entered my waiting-room door, her heart gave a sudden "flop" and she had been conscious ever since that it had been beating very rapidly. She was pale and somewhat short of breath, but walked out to my automobile, was driven home a mile and a half, walked up to the second floor, undressed alone and went to bed.

Course of Disease.—The attack lasted seven hours, ceasing as abruptly as it began. When it stopped the patient was very dyspneic and faint and thought that she was going to die. This passed off in a few minutes and except for exhaustion the patient felt perfectly well. The next morning she was able to go about her work as usual. There was absolutely no assignable reason for either the onset or cessation of this particular attack. She has had ten or twelve attacks in three years, each lasting from thirty minutes to nine hours. I have seen her in only two of these attacks, although I have seen her many times for other complaints. She had one while in Harper Hospital, convalescent from an operation. She had one at Port Huron and was seen, I believe, by Dr. Stockwell. The mitral murmur and thrill, which are ordinarily distinct, in her case could not be detected during the tachycardia. During the second attack in which I saw her, I made sphygmographic tracings from the radial artery, but unfortunately lost them. The record was "saw-tooth," perfectly regular, very similar to one published by Mackenzie.[1]

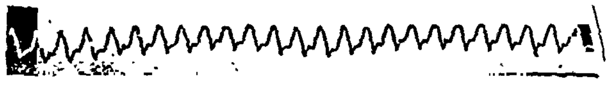

Fig. 1.—Sphygmographic tracing of radial pulse taken during an attack of paroxysmal tachycardia. Pulse 220.

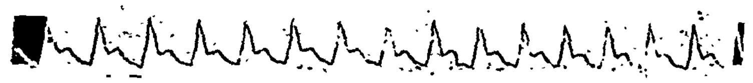

Fig. 2.—Sphygmogram of same patient taken between attacks. Case of mitral stenosis. Rate of pulse, 90.

SYMPTOMS

In general the attacks come on suddenly, usually without warning of any kind, and almost invariably without relation to any recognizable premonitory signs. The first intimation of the attack is usually described as a "flop" of the heart, and the tremendously increased rate is started almost instantly. The onset has been observed in a few cases and three or four extrasystoles have been observed before the greatly increased rhythm began. This, however, is not constant. There follows a sense of pressure over the precordial area, and almost invariably an inclination of the patient to sit down. Marked anxiety is shown, which usually passes off as the patients become accustomed to the attack and find that they have no pain and are not going to die immediately. The patient prefers a horizontal pose. The face is usually pale. Profuse sweating has sometimes occurred, but is unusual. Duration of attacks varies from a few hours to six or eight weeks. Usually there are no murmurs, the sounds of the heart corresponding to the fetal type. There may be greater or less depression, depending on the strength of the heart muscle. Patients show always a strong inclination to avoid exertion, although they apparently do not increase their discomfort by moving about, except a certain shortness of breath. Thus, my patient rode in from Pontiac on the trolley-car during an attack and then took the street-car three miles out to her residence, and apparently suffered no ill effects from it, although she was badly frightened.

The end of the attack is usually as abrupt as its onset. There is another "flop" and a feeling of goneness and suffocation with a subjective impression of impending death. This passes off in a few minutes, however, and except for exhaustion, the patient feels as well as before. In cases long continued, and especially those in which the heart was weak in the beginning, signs of stasis may occur; dyspnea, cyanosis, edema, cold extremities. Even in cases in which death was apparently imminent, sudden cessation of the attack has occurred, with prompt relief of all the extreme symptoms.

ETIOLOGY AND PATHOLOGY

It has not as yet been possible to produce paroxysmal tachycardia by any experimental procedure on the nerve-supply of the heart. Mackenzie, who has studied this condition and had autopsies performed on a number of these patients, designates this action of the heart as "nodal rhythm." An explanation of this term requires the consideration of the recently changing theories concerning the origin of the heart-beat.

For many years what is known as the "neurogenic" theory held complete sway among physiologists. This theory went on the assumption that the heart-beats originated in ganglion cells of the nervous system and were carried through nerve tissue to the muscular tissue of the heart, and that the function of the heart-muscle itself was simply that of contraction. Modifications in this theory were made to correspond to increasing knowledge, anatomic and physiologic. Latterly it was taught that the heart rhythm originated in the ganglion cells present in the heart and was distributed by nerve fibers to the heart muscle. The inhibitory influence of the vagus and the opposite action of the accelerator nerves were discovered and fitted in perfectly with this theory. Two objections, however, were brought forward. In the first place, some parts of the heart, like the apex and the aortic bulb, contain no ganglion cells. They can be made to beat rhythmically, however, under proper conditions after having been separated from the rest of the heart. The second objection was that in some animals pulsations of the heart appear in the embryo long before there are any ganglia in the tissues of the heart. For example in the chick the pulsations of the heart are noticeable in thirty-six hours, but the heart contains no ganglia until the sixth day.

Finally Gaskell, in experimenting on the heart of a tortoise, found that he could cut all the nerves without interrupting the rhythm of the heart so long as the venmuscular connections between the sinus and the ventricle were undisturbed. After cutting the muscular connections the ventricles stopped and then started again, beating with a rhythm different from that of the auricle.

In 1893 a very important contribution to our knowledge of these facts was made by the discovery of the bundle of His. This consisted of muscle fibers passing from the right auricle into the auriculoventricular septum, and sending branches out into both ventricles. The muscle cells in this bundle differ in structure from the other muscle fibers of the heart, being embryonic in character; that is to say, they are apparently the remains of the primitive cardiac tissue. The location of this bundle I have sketched in the drawing (Fig. 3).

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[1] On March 4, 1910, the patient was seen in a typical attack of paroxysmal tachycardia, and the accompanying tracing was taken at the time. The pulse was 220, the patient anxious, short of breath, slight sweating, more comfortable sitting than reclining. Apex two fingers outside nipple line. No first sound; usual thrill and murmur absent. Attack lasted seven hours. When rhythm returned to normal, patient was unconscious for several minutes, but next morning was able to do her work as usual.

Later, Tawara, a Japanese investigator, separated a complicated net-like nodule from the rest of the fibers of the bundle of His, and this is now known as Tawara's node, or the atrioventricular node. Later Keith described a second node similar to Tawara's situated at the juncture of the superior vena cava and of the auricle. Tawara's node is in the auricular part of the bundle of His. These nodes receive special arteries, and are now looked on as the seat of the impulses of the heart-rhythm.

The modern or myogenic theory of the heart-rhythm is that the impulses arise in and are transmitted by this primitive cardiac tissue known as the bundle of His, which is composed of muscle cells embryonic in character. In particular it is believed that normally the impulses arise in the node of Keith. The experiments previously referred to, however, in which the ventricles started up with an independent rhythm after both nerve and muscle connections were cut, are taken to prove that Tawara's node alone also may originate impulses capable of producing ventricular impulses. All these, of course, are subject to inhibition and acceleration by the well known nerve channels.

The nodal rhythm of Mackenzie rests on the assumption that for some reason the impulse begins in the node of Tawara instead of Keith, thus reversing the normal sequence of contraction, or even in some cases, he believes, there seems to be no auricular contraction whatever. The nodal rhythm is found not only in paroxysmal tachycardia, but also in various arrhythmias. The change in the origin of the impulse might occur through one of two means, either the impulse from the auricle is interrupted in its transmission to Tawara's node, and the latter being independent takes the lead, or through disease Tawara's node becomes more sensitive and originates impulses at a rate which interferes and possibly overcomes the auricular impulse.

In two cases of paroxysmal tachycardia which had been observed for several years by Mackenzie, Keith found areas of fibrosis of the myocardium with distinct evidences of cellular changes in the bundle of His. In one case he found total obliteration of the lumen of the artery supplying the bundle and probable degeneration of the cells of the bundle. The pathology known then is a fibrosis and degeneration of cellular elements in the heart extending to the bundle of His in such a way as to produce the nodal rhythm. Hoover says clinical evidence tends to show that paroxysmal tachycardia may result from disease of the medulla or reflexly through the medulla, from affections of the vagi, and from myocardial disease. Pal believes that it may be due to vasomotor relaxation in the splanchnic vessels.

The inability of investigators to produce the condition experimentally is interesting, and many observers have declared the condition a pure neurosis. This conclusion, however, seems hardly justified by our present knowledge. Apparently inhibition is suspended and instead of receiving successively phases of contraction, relaxation and rest, we have a condition approaching embryocardia.

The influence of position in these cases is marked and interesting. Some subjects can stop attacks by standing head down and feet up in a corner. One patient could stop it by leaning forward with the arms hanging down. In the case reported to-night two attacks came on while the patient was leaning over with the arms extended making a bed, and one while putting on a nightdress with the hands high above the head. Hoover relates the following interesting experience:

> A woman aged 35 years had had many attacks of tachycardia during the past ten years, averaging about three or four a year. There has been a very constant relation between nervous or emotional excitement and the attacks. The common sequence of events has been, constipation followed by accumulation of gas in the stomach and bowel, several sleepless nights, and then the attack of tachycardia which sometimes began with the "heart-flop" and at other times the tachycardia was in full force before any warning of any kind was perceptible. She had learned to bear these attacks with equanimity and no longer permitted them to interfere with attendance on her household duties, as she experienced no severe discomfort. Never before had a paroxysm of tachycardia lasted more than eight hours, but in this instance it persisted twenty-eight hours. The patient had been operated on two weeks before for suppurative salpingitis, and both tubes and ovaries were removed. A daily rise of temperature as high as 101 persisted after the operation. The pulse-rate remained between 100 and 120. The preceding day tachycardia commenced without the slightest warning or any unusual experience. The pulse-rate was 240 per minute, and so small at the wrist that no tracing could be obtained. The heart dulness was increased one and one-half inches to the right of the sternum and one inch external to the nipple line. There was a large centrifugal pulse visible in the external and internal jugular veins which had the same rate as the carotid pulse. It was impossible to determine by inspection the time relation between the jugular and the carotid pulse, but the two tracings taken with the Jacquet polysphygmograph show very clearly that the jugular pulse alternated with the heart and with the carotid pulsations. There were no signs of stasis in the liver or extremities. There was no cyanosis or dyspnea. Embryocardia was well pronounced. The tracings show the correlation between auricular and ventricular contractions as undisturbed. Pressure on the vagi, compression of the abdomen, and holding the glottis closed after deep inspirations had no effect. The patient was then taken out of bed and held with heels up and head down for a minute without result. She was then instructed to take a deep inspiration and "bear down" while in the inverted position. In a few seconds the heart-rate suddenly changed from

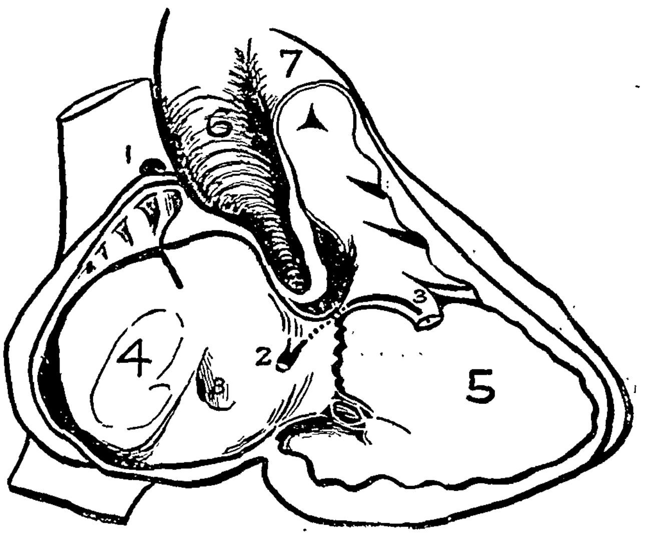

Fig. 3.—Diagram showing position of a portion of the remains of the primitive cardiac tissue, including the nodes of Tawara and Keith. 1. Superior vena cava and node of Keith. 2. Auriculoventricular node of Tawara, from which the auriculoventricular bundle arises. 3. Right division of the auriculoventricular bundle. 4. Right auricle. 5. Right ventricle. 6. Aorta. 7. Pulmonary artery (after Keith).

240 to 120, the rate which was in force at the onset of the tachycardia. The tracings and the exact halving of the heart-rate at the end of the attack show it to have been caused by the liberation of a series of extrasystoles from the auricle, all of which were transmitted to the ventricle. Vasomotor dilatation in the splanchnic area was probably not the cause of this attack. Had that been the case, inversion alone would have sufficed to arrest the tachycardia. The additional factor (viz., forced expiratory effort with closed glottis after a deep inspiration) was required to stimulate the bulbar inhibitory center sufficiently to arrest the series of extrasystoles. The heart-volume returned to the normal boundaries immediately after the tachycardia ceased.

DIAGNOSIS

The diagnosis of paroxysmal tachycardia is usually not difficult. The rate is much higher than in other tachycardias, such as accompany fevers and thyroid diseases. While cardiac dilatation occurs in many cases of this disease, it is accompanied by no arrhythmia unless in the very latest stages. There may be difficulties in the diagnosis of periodic arrhythmia from myocardial disease. In general, however, a pulse-rate over 200, regular, and apparently not the termination of a long period of incompensation, may be pretty certainly set down as paroxysmal tachycardia. Mackenzie states that it occurs as a rare complication of mitral stenosis and aortic insufficiency.

TREATMENT

What has been said concerning the influence of position in these attacks is undoubtedly the most important element of treatment. I have never succeeded in influencing an attack in this way, but apparently it has been done and will often succeed. The simplest device is to put the head down and the feet up, which can usually be done easily on an operating-table or a hospital litter. If there is no dyspnea or cyanosis, the abdomen may be tightly bandaged. Compression of the vagus in the neck has been successful, and the electric current over the vagus may be tried. Ice over the heart or at the nape of the neck should be useful at times.

Drugs seem to be of little value. Mackenzie states that after many year's experience he has decided that his drug treatment has no effect on the attacks themselves. Proper treatment between attacks is, of course, very important. Abstinence from stimulants is important and gastro-intestinal insults should be avoided. In cases in which the blood-pressure is high, persistent measures should be taken to reduce it.

CONCLUSIONS

1. Paroxysmal tachycardia is a term applied to cases in which the nodal rhythm is transient and recurrent.
2. It may occur as a complication in mitral stenosis and aortic insufficiency.
3. While its onset is alarming, the individual attacks usually terminate in recovery very promptly, and this fact necessitates great caution in the prognosis of the disease.
4. Treatment of the individual attacks consists almost entirely in physical therapy by position and external applications. Proper general treatment between attacks is indicated.

Congenital Edema of the Leg.—At the time of the birth of a female child there was noticed a well-marked edematous swelling of the sole and dorsum of the right foot and a swelling of the leg on its front and outer aspects which had continued. The right leg was one-half inch longer than the left, measured from knee to heel. It was believed that a deep angiomatous condition could be excluded.—Maynard Smith, in *Proc. Roy. Soc. Med.*, March, 1910.

A MODIFIED SIMPSON'S TAMPON TO PREVENT NASAL HEMORRHAGE *

MARK D. STEVENSON, M.D.
AKRON, O.

It sometimes becomes necessary to use mechanical means to stop nasal hemorrhage, spontaneous, following operations, or due to any of its many causes. After most nasal operations the patient should be kept in bed in a hospital for a time, but if this ideal condition cannot be fulfilled and the patient has to go home or some distance from the operating room, away from skilled attendance, it is safer to tampon the nares. I will describe a very easy and efficient method of tamponing the nose, which requires but a moment for its performance and is less distressing than packing by gauze or other material. The ordinary treatment of epistaxis by cauterization, etc., will not be considered in this paper.

Rest in bed, the quiet assurance of the nurse or physician that the bleeding will cease, which it practically always does when the blood pressure is sufficiently lowered, ice to the face or neck, hot water bottles to the lower extremities, and, if necessary, to the lower parts of the body, nearly always succeed in stopping the bleeding. The patient should be turned on the side from which the nose is bleeding, so that the blood may drip directly into a pus basin or towel and not compel him to clear the throat of blood or otherwise in any way disturb the clot. The clot is Nature's effort to prevent the hemorrhage and should be conserved.

I think the application of drugs usually accomplishes little more than to disturb the clot. Peroxid of hydrogen, solutions of cocain, and especially adrenalin, help to prevent or to stop immediate hemorrhage, but I think there is greater likelihood of after hemorrhage than if they had not been used. I do not put as much confidence as some do in the use of the calcium salts before an operation.

After a nasal operation, if the patient cannot be kept in a hospital, it is often advisable to tampon the nasal cavity. I use a tampon composed of compressed cotton, a modification of Simpson's tampon. I found the Simpson tampon too small, so I had larger ones made. They are three inches long and one-half inch wide by one-sixteenth or one thirty-second inch thick; when moistened they swell until very much thicker. The cotton tampon must be kept dry before introducing. It should be wrapped in thin gutta percha of equal length, the gutta percha being wrapped around the tampon two or three times, much like wrapping a cigarette, and the free edge, except at the ends, gummed down by some sterile ointment, e. g., zinc oxid or 2 per cent. calomel ointment. The gutta percha tissue is easily kept clean by keeping it cut into proper sized pieces, three inches long by two and one-half inches wide, in a 1 to 2000 solution of formalin. The thin gutta percha which deteriorates in the air keeps well in this solution and should be thoroughly dried between layers of gauze before applying to the tampon.

If it is desired to plug the naris without knowing where the hemorrhage is coming from, or following removal of the inferior turbinate or a large ridge or spur low down on the septum, the long tampon is introduced into the naris and pushed horizontally backward along the floor of the cavity until entirely within the nose. The posterior end will then lie in the posterior choana. Sterile water, normal saline, compound tincture of benzoin, or some mildly antiseptic solution should then be dropped on the open end of the tampon, which will cause it to swell. Moisture may also be admitted through a few small perforations in the gutta percha. The tampon will then press evenly against the external wall of the nose and septum and occlude the posterior choana and anterior naris. The septum ordinarily is fairly elastic and gives a little so that too much pressure is rarely, if ever, felt. In a wide fossa two are required side by side. They are best introduced at the same time, although they should be wrapped separately in gutta percha, as they are then more easily removed. Occasionally one should be split and one and a half introduced or even two and a half. Experience soon teaches how many to use. In some very narrow anterior nares the full size may be too wide to introduce, or it might seem that when swollen it would be too large to remove easily. The tampons can be readily narrowed to any desired width by a strong pair of scissors. They rarely require to be shortened.

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* Read before the Ophthalmological and Otolaryngological Section of the Cleveland Academy of Medicine, Feb. 25, 1910.

I have never had any special difficulty produced in the nasopharynx, tube or ear, after using the tampons, although in twenty-four or forty-eight hours they should be removed, as they are no longer needed. After removal of the middle turbinate or a spur high up on the septum they can be cut much shorter and introduced high up into the nasal fossa where, after moistening, they remain. Simpson's tampons which can be used in the upper portion of the nasal fossa are much too short to use in the lower part of the nose, and if two are used, one in front of the other, some difficulty may be experienced in removing the posterior one. Good, who was the first man I saw use Simpson's tampon, has also devised a much larger one, but it is so wide that, in my opinion, it could be introduced and removed through only a few of the largest nares.

These smooth surfaced tampons are easily and usually painlessly (in contrast to gauze or cotton packing) removed, preferably by an alligator forceps. Hemorrhage usually follows removal for a few moments, but if the clot is not disturbed by blowing the nose there is little bleeding. Usually the clots should not be washed out for another twenty-four hours, and only very gently at first, depending on the case. If the end of the tampon in the anterior naris is covered by swelling of the mucous membrane, after the mucus is wiped or sprayed away, a 10 per cent. cocain in adrenalin (1 to 1000) solution can be applied on pledgets of cotton, quickly shrinking the swollen tissues and exposing the often flesh-colored end of the tampon. If the septum is too freely movable it may be supported in the opposite nasal fossa by another tampon, or, if it be thought necessary to breathe through that side of the nose, by some of the pervious nasal splints or by a proper sized piece of rubber tubing. There is no distress in introducing tampons following an operation, and very little in any case. If an anesthetic has not been previously used for an operation the nares should sometimes first be sprayed with a weak solution of cocain or other local anesthetic, and adrenalin.

—**Congenital Absence of Left Femur.**—P. Lockhart Mummery (*Proc. Roy. Soc. Med.*, March, 1910) reported the case of a male child, aged 2, in which there was an absence of the left femur. The knee-joint appeared to be normal but was close up to the left hip; below the knee, the leg was normal but rotated outward. The *x*-ray shows the diaphysis of the left femur missing, the lower epiphysis being present, with a small island of cartilage above this. The child showed no other congenital defect and is healthy.

RESPIRATORY JOINT CREPITATIONS

CHARLES MINER COOPER, M. D.

SAN FRANCISCO

For many years I have occasionally heard confusing adventitious sounds over the scapular areas during auscultation of the organs of respiration. They may be of a creaking, crunching or bubbling character, and may occur during either or both phases of respiration. They are somewhat superficial and are confined to the scapular areas, or, if they extend outside, lose considerably in intensity at the bone margin. Displacement of the scapulæ forward causes them to disappear, and clear respiratory sounds are now audible when the stethoscope is placed over the same pulmonary area.

I have been able to demonstrate these sounds to students in the clinic and have hitherto listed them under the term "the scapula rub." Three well-marked cases of late have enabled me, however, to trace their origin. In all three cases they were produced in the apparently healthy shoulder-joint during its respiratory movement. From this position of maximum intensity they were propagated by the scapula to the suprascapular and infrascapular regions and by the humerus along the arm, over which they were heard with peculiar distinctness. In one instance they were propagated along the clavicle, but did not reach the sternum. In two of the three cases they had led the examiner to entertain a suspicion that the patient had tuberculosis.

I have deemed their occurrence of sufficient importance to draw attention to for the following reasons:

1. No mention is made of them in the student's text-books.
2. They sometimes lead to an erroneous diagnosis of tuberculosis of the lung area over which they are heard.
3. Physicians who devote most of their time to the treatment of tuberculosis tell me that though they have long heard similar sounds they have never been satisfied as to their origin.

It seems not improbable that similar confusing sounds may be produced in the sternoclavicular and acromioclavicular joints.

TRAUMATIC RUPTURE OF THE MESENTERY*

MAHLON D. OGDEN, M.D.

Professor of Pathology, Medical Department, University of Arkansas
LITTLE ROCK, ARK.

Most American and English authors either disregard this condition or treat it only as a complication of rupture of the intestine. In the latter form it is frequent, but rupture of the mesentery alone without other lesions in the intestine is comparatively rare. A few cases have been reported by German and French authors.

Neumann[1] reports one case in a boy run over by a wagon, the blood-vessels were ligatured and the mesentery sutured. Complete recovery followed. Neumann also collected nine cases (reported 1845-1896) in which autopsies had revealed rupture of the mesentery; the injury being due in most cases to being run over by wagons, or to falls or jumps from heights; in one case, to a kick by a horse and in one, that of a car conductor to being jammed between his car and a wagon.

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* Read before the Pulaski County (Ark.) Medical Society, March 21, 1910.

[1] Neumann, R.: Beitr. z. klin. Chir., 1904, lxiii, 676.

Kudlik[2] reports two cases, one of a child run over by a wagon, one of a man injured in a factory; both showed rupture of the mesentery without injury to the intestine, with hemorrhage. The child recovered from the operation; the man died from peritonitis.

Autenrilth[3] reports one case, that of a child of 4½ years, also run over; the mesentery was ruptured, tearing many of the branches of the arteria mesenterica, with serious hemorrhage. The child recovered.

Laubie[4] describes an autopsy on a man who fell from a height of 15 meters and died a few hours later. The mesentery was ruptured with hemorrhage of the mesenteric artery; no other lesion of the intestines. Death was probably due to hemorrhage.

Erdmann[5] reports three cases; in two of which the mesentery was torn from the intestine; and one in which there were as many as twenty lacerations of the mesentery causing hemorrhage. Recovery ensued in all cases.

Hume[6] reports a case of torn mesentery followed by resection of a portion of the intestine and recovery.

The following is a case which came under my observation, post mortem:

History.—On July 31, 1909, about 9 p. m., the patient, P. J. I., a white man, aged 40, engaged in a fight on the street, in the course of which he either fell or was knocked down and some witnesses stated that he was kicked in the abdomen. Apparently not much injured, with the exception of a few bruises about the face, he was arrested and taken to the police station. About 10 p. m. he complained of pain in the abdomen and a physician was called. A few bruises on the face and a rapid pulse (which was attributed to his drinking) were the only objective symptoms found. The next morning (Sunday) at 7 a. m., he was removed to a hospital, still complaining of abdominal pain. His temperature was 97 F. and his pulse 70 and very weak. During the day, however, he was able to walk about the ward. At 6 p. m. his temperature was 97 F. and his pulse was 80. Sunday night he vomited several times and had to be catheterized. On Monday, August 1, at 6 a. m., his temperature was 100 F. and his pulse could not be counted. From then on his condition became progressively worse until he died at 3 p. m.

Autopsy.—All organs were practically normal. No bruises or marks on abdominal wall. The abdomen was filled with fluid blood which came from an irregular tear entirely through the mesentery. The tear was 3 cm. long, just opposite the fourth lumbar vertebra and 2 cm. from the posterior attachment of the mesentery.

I am indebted to Dr. O. K. Judd for the clinical history of this case.

A REMARKABLE CASE OF METHYL-ALCOHOL POISONING

CARL KOLLER, M.D.
NEW YORK

History.—Mrs. M. D., a Russian Jewess, was brought to the office blind on March 8, 1910, giving a history of failing vision beginning eleven days before. After an examination which led to the probable diagnosis of toxic amblyopia, the following history was elicited. Fifteen days before she had been present at a dinner, on which occasion she partook of a small quantity of whisky, about one tablespoonful. Her habits had been temperate, that is, she was accustomed to take 1 to 2 teaspoons of brandy once a day with her mid-day meal. Two days after the dinner she began to have pain over the eyeballs, more marked on moving the eyes, also headaches and some blurring of vision. The diminution of vision continued until the vision of the right eye was absolutely abolished, that of the left considerably reduced. This was three days before she was brought to me.

Examination.—With neither eye could the patient count fingers at any distance. The fields taken roughly with a visiting-card brought out the fact that there was an absolute central scotoma in the right, with some indefinite peripheric vision present, except below. The field of the left eye was similar, but with no central scotoma. There was absolute color-blindness. The ophthalmoscopic picture was that of marked papillitis in both eyes (amounting to 5 diopters in the left and 3.5 diopters in the right eye), with enormously widened and somewhat tortuous veins. Even the finer veins leading from the macula were greatly injected. The arteries were only slightly narrowed. The retina itself seemed in no way involved. The pupils were quite wide, but not fixed, reacting weakly and widening again. The general history and physical examination disclosed that the patient had been suffering from cholelithiasis for some time past. Considering the rapidly failing bilateral loss of vision, the diagnosis of toxic amblyopia suggested itself in spite of the marked papillitis and the headaches, which latter a rapidly growing intracerebral neoplasm might have explained. The brandy habitually consumed by the patient was examined by Dr. Arthur Bookman of the Mount Sinai Pathological and Chemical Laboratory and found to contain 6 per cent. of methyl alcohol. The dinner whisky could not be obtained.

Course of Disease.—In the further course of the case, during the next week, there was at first an increase in the swelling of the nerve-head with a few small hemorrhages, very narrow arteries, and still greater contraction of the field until only the upper outer quadrant in either eye remained. After another week the functional examination showed improvement in vision to the extent of counting fingers at 1 foot with either eye, and considerable enlargement of the fields, bearing out, for the first time, the report of subjectively improving vision. Objectively, the swelling of the discs had diminished, the outline being fairly well defined in the right eye and shining through the still edematous fibers in the left. After ten days more, both discs looked fairly normal and not even especially pale; except that the larger arteries were still considerably narrowed. The fields for white were roughly of apparently normal size, though no further improvement in central vision, beyond the counting of fingers at 1 foot could be noted. At the present writing, about seven weeks after the onset of the trouble, the patient's vision in each eye has improved to 20/50. The field is normal for white and for colors. The pupils react well. Ophthalmoscopically the nerves are slightly pale and the arteries less filled than normal.

The remarkable features of this case are that it occurred in a temperate woman in whom wood-alcohol poisoning would not easily suggest itself; that it was probably a case of chronic poisoning in which the addition of a somewhat larger dose brought on the acute symptoms; that only a very small quantity of the poison (about 7 to 8 grains) was ingested daily; and that the papillitis present was intense.

It is well known that methyl alcohol taken in small quantites is innocuous to many persons, whereas, on the other hand, there are many people for whom even half a teaspoonful would constitute a poisonous dose. This difference in susceptibility to the poison is probably due to the difference in secondary chemical compounds formed in the alimentary canal and the blood. At one time formaldehyde, one of these, was suspected, but this is probably not correct, nor can any admixed impurities, such as acetone, which was also accused, be made answerable.

In my patient the symptoms of cholelithiasis showed a disturbance in the function of the liver and consequent interference with digestion. It is probable that her intolerance to the small doses of methyl alcohol was due to this condition.

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[2] Kudlik: Deutsch. Ztschr. f. Chir., 1908, xciv, 327.

[3] Autenrilth: München. med. Wchnschr., 1908, lv, 513.

[4] Laubie, A.: Gaz. hebd. d. sc. méd. de Bordeaux, 1907, xxviii. 29.

[5] Erdmann, J. F.: Am. Jour. Med. Sc., 1905, New Series, cxxix, 980.

[6] Hume, G. F.: Univ. of Durham, Coll. Med. Gaz., 1906, vi, 122.

The ophthalmoscopic picture of methyl-alcohol poisoning appears under three varieties or degrees: first, entirely negative; second, with a well-defined pale disc and contracted arteries from the beginning, and third, as a neuroretinitis of moderate degree.

Pathologically, two structures are affected in methyl-alcohol poisoning, the ganglion cells and the blood-vessels, and probably the ophthalmoscopic picture varies according to the kind of structures involved and the degree of involvement. In the first variety, with the negative opthalmoscopic picture, the ganglion cells are primarily injured and the injury leads subsequently to the ascending atrophy of the nerve fibres.

The second picture, pale nerve with narrow arteries must be due to the effect of the poison or the respective derivatives of the poison on the blood-vessels, and is comparable to the effect of poisoning with quinin and the salicylates.

The third picture, neuroretinitis with swelling of the nerve-head and engorged veins, is either due to a real neuritis or dependent on altered circulation and pressure conditions within the cranial cavity.

In both these latter forms, there is of course the ganglion cell degeneration added to the circulatory disturbance. As a final result we find ophthalmoscopically a simple atrophy, corresponding to the first class, and a neuritic atrophy, corresponding to the second and third pictures.

681 Madison Avenue.

POISONING BY MERCURIC CHLORID THROUGH VAGINAL DOUCHES

ARTHUR J. PATEK, M.D.
MILWAUKEE, WIS.

In discussing the various ways in which mercury, therapeutically administered, may be absorbed with toxic consequences, little emphasis has been laid on the danger attending its use in vaginal douches. The drug is surely freely used in this manner, and doubtless many individuals show a dangerous susceptibility to its irritating effect.

A recent experience with a fatal case of mercury poisoning through vaginal douches, is worth recording, so that it may constitute a warning to others. Inasmuch as several similar cases have recently been reported[1] in THE JOURNAL, the chronicling of another. even though it be a rare experience, must be considered an urgent duty.

The patient, Miss K., aged 35, first consulted me on the morning of Jan. 23, 1910. She gave a history of persistent vomiting and purging of four days' duration. Careful questioning elicited no satisfactory information, and her symptoms were without known cause. The taking of medicine in any form was denied. An epidemic of intestinal grippe was raging at the time and her condition was ascribed to this. She complained of no pain whatever, nor did physical examination elicit anything further. Powders of bismuth and morphin were given.

She was again seen January 25. Purging had ceased entirely, but vomiting followed everything taken by mouth. No pain was complained of, and the abdomen was not sensitive to touch. There was neither headache nor dizziness; vision was good. Since Jan. 23, anuria had existed. Again detailed questioning elicited absolutely no information of value, and the patient again denied having taken medicine or of even having used drugs or medicine in any form whatever. Efforts to stimulate the flow of urine were made. During the following night a small quantity was voided (after 72 hours' anuria) which, inasmuch as menstrual flow had begun, the attendant failed to save, as had been directed. On the previous day epistaxis was noted, continuing 36 hours. While during the first few days the mental condition was apparently normal, the patient occasionally lapsed into a dazed state when she remained unnoticed. Epistaxis recurred on Friday the 28th, and with the vomitus much of the swallowed blood was regurgitated. On the evening of this day four ounces of bloody urine were withdrawn by catheterization. It contained an abundance of albumin, epithelial cells, hyaline casts, blood and pus. Every effort was made to restore the action of the kidneys, but, save a slight response as indicated by a small quantity of bloody secretion, no further result was attained. The patient was in a stuporous condition during the night of Friday the 28th and the following day.

Although suspecting that the patient had taken mercury in some form, either with suicidal intent or by accident, this was strenuously denied, and no explanation for the rather characteristic symptoms of corrosive sublimate poisoning was suggested. However, on Saturday, the 29th, the day before her death, corroborative information of the suspected cause was obtained. I was reliably informed that on the day she was first taken ill, January 19, *four days prior to my first visit*, she had consulted another physician, complaining of severe irritation and burning of the labia. This physician was told that she had been using douches prepared by dissolving tablets in water, and the tablets were recognized by him as being mercury bichlorid. On examination he found a most intense inflammation and edema of the labia and vaginal tract. so much so that instrumental examination was impossible; and he noted the patient's excruciating suffering from the local condition.

Lacking evidence that the patient had taken mercury in any form by mouth, it is evident that the absorption of the poison in toxic quantities must have taken place through the vagina. The strength of the solution used is not known. In any event, this case, and others recently noted in THE JOURNAL[1], ought to constitute a warning to physicians that mercury can hardly be employed with safety in this manner.

141 Wisconsin Street.

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[1] THE JOURNAL A. M. A., April 9, 1910, p. 1203 and April 30, 1910, p. 1458.

BRONCHIAL VINCENT'S ANGINA

J. H. ROTHWELL, M.D.
LIBERTY, MO.

Vincent's angina is a disease that usually attacks the throat, especially the tonsils. The following cases, I think, will show that, like diphtheria, Vincent's angina sometimes attacks the tracheal and bronchial mucous membranes.

CASE 1.—Miss A., went to Kansas City, Dec. 7, 1909, to visit a brother, not feeling well when she left home. At 10 a. m., December 10, while down town shopping she was taken with a chill. She was taken to her brother's home and a physician called, who pronounced it a severe case of pneumonia and advised that the patient be brought to her home here.

I saw her about 7:30 p. m. Her temperature was 104 F. There was intense pain in the left side below the nipple, constant coughing, with profuse, bloody fluid sputum, and a sensation of great oppression over the upper part of the chest and a sensation of smothering. The breathing and cough resembled those of both asthma and croup. The tongue was clean and the throat not involved, no membrane or ulceration of any kind being present. I could make out no consolidation of the lung and the case did not impress me as being pneumonia. I procured some of the sputum and a smear showed it to be full of Vincent's spirilli and fusiform bacilli. This was evidently a case of bronchial infection, just as we sometimes have laryngeal and bronchial diphtheria. The next morning the temperature was normal and from that time for ten days or two weeks it varied from normal to 102 F. The characteristic breathing, cough and sputum continued, though gradually abating. The patient was able to be up in about three weeks. Six weeks later, on any exertion, such as sweeping, she would expectorate the same fluid, bloody sputum full of Vincent's spirilli, and it was two or three months before she was entirely free from them.

Case 2.—Another case was that of a woman who came to visit her sister to recuperate from an attack of grippe. After a few days I was called to see her. She was suffering with pneumonia; the infective agents at this time being the *Pneumococcus* and *Diplococcus catarrhalis*. She was a very delicate epileptic, with a very bad heart lesion, but she recovered in the usual time and went to her home. In a few days she was brought back again with a relapse, the infective organisms this time being those of influenza and *Diplococcus catarrhalis*. Every day or two during this attack she would have a seizure of severe, asthmatic coughing, with a sense of great oppression in the chest and a smothering sensation, accompanied by the expectoration of a fluid, bloody sputum full of Vincent's spirilli and fusiform bacilli. At other times the sputum did not contain many spirilli and often none. But when these attacks did come on the cough, breathing and sputum were characteristic of the former case.

These two cases were very interesting to me and similar cases have never been reported so far as I know. Altogether I have had three cases complicated with bronchial, Vincent's angina. I reported these cases to Dr. Frank J. Hall, a pathologist, of Kansas City, Mo., and he said that he had never seen any cases like them, nor had he seen any reported. Several months later, while I was visiting his laboratory, he told me that he had, a few days before, been called, with another physician, to see a patient whose case was a puzzling one, the patient having been under treatment then for six weeks, and he had found the same characteristic symptoms, viz.: the oppression of the chest and smothering sensation, and the breathing and cough resembling those of asthma and croup and the fluid bloody sputum which I had described to him as occurring in my cases. On microscopic examination, the sputum was found to contain great numbers of Vincent's spirilli and fusiform bacilli. On the strength of the diagnosis, iodids were administered and iodin in a nebulized form used. In two or three days the patient was greatly relieved. He reported that Dr. Hall said that no sign of the disease was apparent in the throat. So I am convinced that Vincent's angina sometimes attacks the tracheal and bronchial mucous membranes.

THE DIFFERENTIATION BETWEEN DEMENTIA PRÆCOX AND DEPRESSIVE STATES BY SO-CALLED BIOLOGIC BLOOD-TESTS*

ELLEN CORSON WHITE, M.D.
AND
S. D. W. LUDLUM, M.D.
PHILADELPHIA

While the Wassermann reaction is of greatest value in differentiating between syphilis and non-syphilitic diseases of the nervous system, it does not permit of further differentiation between so-called functional nervous diseases.

Recently Much published a description of a method by which, he believed, he could differentiate dementia præcox and manic-depressive disease from other diseases. The method is based on the inhibiting action of blood-serum in cobra hemolysis. His results have not been confirmed by others.

In the following we wish briefly to state that we seem to have been able to differentiate by relatively simple methods between dementia præcox on the one hand and melancholia on the other.

Our method is based on the determination of the fixation of complement of guinea-pig serum by the serum of the patient. We found that in melancholia the amount of complement absorbed is very much larger than in all other diseases that we have encountered, and also much larger than in dementia præcox, in which disease it is approximately normal.

We have tested 67 cases of various mental diseases, 37 cases of melancholia half of which were of the manic-depressive type, and the others involutional. So far our test has been decisive and characteristic in all cases examined. We shall continue the examination for possible exceptions.

We also wish to state that it is possible to differentiate more clearly between mental diseases by using very carefully standardized factors in Much's method. In our cases this reaction always occurred in dementia præcox and almost never in melancholia, when all the factors were standardized.

In conclusion we wish to say that our results distinctly indicate that in so-called functional mental diseases, chemical changes in the blood take place, and can be discovered by so-called biologic methods.

216 South Fifteenth Street.

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* Preliminary Report from the Laboratory of Neuropathology in the University of Pennsylvania.

ILEUS, DUE TO MECKEL'S DIVERTICULUM

ATTACHMENT OF TERMINAL LIGAMENT TO MESENTERY MAKING RING, THROUGH WHICH ILEUM FORMED A HERNIA WITH STRANGULATION

C. E. HARRIS, M.D.
BLOOMINGTON, IND.

History.—W. F. N., male child, aged 2, up to Dec. 23, 1909, had had no serious illness. About 3 a. m., December 23, the child awoke and seemed to be in great pain. Half an ounce of castor-oil was given by the parents. About 5 a. m. the child began vomiting. Pain and vomiting continuing, a physician was called about noon. He prescribed calomel and more castor-oil, but everything given by mouth was rejected. On the second day several enemas were given, and, excepting a very small stool following the first enema, neither feces nor flatus passed. There had been no mucus nor blood passed per rectum. Pain, vomiting and absolute constipation had been continuous from the beginning of the illness. I was called on the evening of the fourth day and found that the child had died a few minutes before my arrival. I asked for an autopsy and the privilege was granted.

Autopsy.—Hippocratic facies marked; abdomen greatly distended. On opening the abdomen several greatly distended coils of small intestine presented. The intestine had lost its luster and was very dark in color; the mesenteric vessels were engorged. Folowing the small intestine downward, I found several collapsed coils massed in the ileocecal region. Here I found a band surrounding the intestine, above which the bowel was greatly distended, and below, it was collapsed. The appendix was in a normal condition. I tied off the cecum a short distance above the ileocecal junction and the ileum just above the constriction, removing the specimen. On examination it proved to be a Meckel's diverticulum, 2 inches in length, 3/4 inch in breadth, arising 14 inches from the ileocecal valve, with a terminal ligament attached to the mesentery directly opposite its base, forming a ring through which the ileum had become herniated.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(*Continued from page 1789*)

MAMMARY SUBSTANCE—Armour.—Mammary Substance—Armour, consists of the mammary gland of the sheep freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A yellowish to orange colored powder, having a slight peculiar odor. Only partially soluble in water.

One part represents approximately 4½ parts of the fresh mammary gland of the sheep. It contains nucleoproteid which, when treated with dilute sulphuric acid, yields guanin. (S. Fränkel. Descriptive Biochemie, p. 386). Upon incineration, it should not yield more than 9 per cent. ash.

Actions and Uses.—See Mammary Gland (N. N. R., 1910, p. 141).

Dosage.—0.13 to 0.3 Gm. (2 to 5 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

Mammary Substance Tablets-Armour.—Each tablet contains desiccated mammary substance 0.13 Gm. (2 grains).

Dose.—1 to 3 tablets three times a day.

DESICCATED SPLEEN—Armour. — Desiccated Spleen—Armour, consists of the spleen of the calf, freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A dark yellowish colored powder, having a peculiar odor. Partially soluble in water.

One part represents approximately 4¾ parts of the fresh spleen substance. It contains nuclein and iron. Upon incineration, it should yield not more than 7 per cent. ash.

Actions and Uses.—See Spleen (N. N. R., 1910, p. 144).

Dosage.—0.13 to 0.25 Gm. (2 to 4 grains) every three or four hours.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

Spleen Tablets-Armour.—Each tablet contains desiccated spleen 0.065 Gm. (1 grain).

Dose.—1 to 3 tablets three times a day.

DESICCATED PAROTID GLAND—Armour. — Desiccated Parotid Gland—Armour, consists of the fresh parotid gland of the ox, freed from fat, cleaned, dried and powdered, without the addition of either preservative or diluent.

A yellowish colored powder, having a slight peculiar odor. Partially soluble in water.

One part represents approximately 5 parts of the fresh parotid gland of the ox. Upon incineration, it should yield not more than 7 per cent. ash.

Actions and Uses.—See Parotid Gland. (N. N. R., 1910, p. 142).

Dosage.—0.2 to 0.3 Gm. (3 to 5 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or trademarked.

Parotid Tablets-Armour.—Each tablet contains desiccated parotid gland 0.13 Gm. (2 grains).

Dose.—1 to 2 tablets three times a day.

OVARIAN SUBSTANCE—Armour. — Ovarian Substance—Armour, consists of the entire fresh ovaries (including the corpora lutea) of the hog, cleaned, dried and powdered, without the addition of either preservative or diluent.

A yellowish colored powder having a peculiar odor. Partially soluble in water

One part represents approximately 6¾ parts of the fresh ovary of the hog. It contains gelatin, mucin, nuclein and the active constituent of the corpus luteum. Upon incineration, it should not yield more than 7 per cent. ash.

Actions and Uses.—See Ovary (N. N. R., 1910, p. 141).

Dosage.—0.06 to 0.2 Gm. (1 to 3 grains) three times daily.

Manufactured by Armour & Co., Chicago. Not patented or copyrighted.

Ovarian Substance Tablets-Armour.—Each tablet contains ovarian substance 0.13 Gm. (2 grains).

Dose.—1 to 2 tablets three times a day.

ORCHIC SUBSTANCE—Armour. — Orchic Substance—Armour, consists of the pulp from fresh ram testicles removed, dried and powdered, without the addition of preservative or diluent.

A light yellow powder, having a peculiar odor. Partly soluble in water.

One part represents approximately 7 parts of the fresh pulp from the ram testicle. Upon incineration, it should yield not more than 10 per cent. ash.

Actions and Uses.—See Testicle (N. N. R., 1910, p. 144).

Dosage.—0.13 to 0.3 Gm. (2 to 5 grains) three times a day.

Manufactured by Armour & Co., Chicago. Not patented or copyrighted.

Orchic Substance Tablets-Armour.—Each tablet contains orchic substance 0.13 Gm. (2 grains).

Dose.—1 to 3 tablets three times a day.

(*To be continued*)

Therapeutics

RHEUMATIC FEVER

This acute disease, that is in all probability an acute infection, is so serious for the future of the individual who is unfortunate enough to have an attack, that the repeated discussion of its treatment is always in order. In spite of a pretty good understanding of its management and of the frequency of its complications, its successful treatment as to shortening the duration and preventing cardiac complications has hardly advanced at all in many years. An article by Dr. Frank S. Meara, in the *American Journal of the Medical Sciences,* March, 1910, presents modern ideas of the best management of acute inflammatory rheumatism.

Meara recalls to our minds that about one-half of all cases of rheumatism occur between the ages of 15 and 25 and about one-quarter between 25 and 35. He is right in believing that there are many undiagnosed attacks of rheumatism in young children, as many times a child may have rheumatic fever without swelling, heat, or redness in the joints. It is possible that many unexplained valvular lesions of the heart, discovered in later years and attributed to various other infections such as scarlet fever or diphtheria, may really date from an undiagnosed rheumatism. On the other hand, infants who are generally babies who are fed on other food than mothers' milk, are many times believed to have rheumatism. (On the other hand, infants, who are generally babies who are fed on other food than mothers' milk, are many times believed to have rheumatism) when scurvy is the trouble. Children from 3 years upward should be carefully examined for slight fever, for some joint localization, and for cardiac disturbances if they have been or are subject to what has long been termed "growing pains." It should be remembered that a so-called subacute arthritis can allow or cause endocarditis with subsequent valvular lesions. Hence anyone with an arthritis, with much fever or with little, should be placed at rest, unless the joint inflammation is considered a surgical process and the joint is surgically immobilized.

A patient with acute rheumatism should have as much fresh, pure air in his bedroom as is now believed necessary in all the acute infections. Dampness and stagnant air are especially prone to perpetuate the disease while sunlight is a distinct aid in shortening the duration of the attack of rheumatic fever.

Meara believes that many acutely ill patients, and perhaps especially rheumatic patients, are under-fed, and he presents strong arguments for the administration of more food. A patient with fever certainly uses more calories of food than a patient without fever under the same conditions of rest, and it should be carefully decided how much and what kind of food he needs to obtain these necessary calories. He estimates that a man weighing about 150 pounds gives off at rest 2,300 calories, while the same patient with fever, such as rheumatic fever, will give off perhaps, 2,900 calories. A patient who is put on a rigid milk diet of about two quarts a day would take in not far from 1,200 calories, or not nearly what he is giving off. Consequently, he must burn his own fat and later his other tissues, this to his immediate direct disadvantage, and later perhaps, to his positive injury. It is theoretically absurd and clinically wrong to expect or cause a patient to drink enough milk to satisfy the need for calories or heat units (a calorie is considered to represent the heat that is required to raise one kilogram of water from 0 to 1° C.); it is therefore advisable that to the amount of milk, whether a quart, three pints, or two quarts, that is deemed suitable for the individual patient, should be added either cream, or starch, or sugar to furnish more calories for the needs of the body. Meara suggests adding considerable milk sugar to the milk, as furnishing many calories and not rendering it as sweet as cane sugar. Cereal gruels, as well represented by thoroughly cooked oatmeal gruel, will furnish a large number of calories, and makes a pleasant and nutritious food. Meara estimates that each of the following furnish 100 calories, viz.: "An ordinary thick slice of white bread (1⅓ ounces); an average ball of butter (about ½ an ounce); an ordinary helping of boiled rice (4 ounces); a large serving of oatmeal or hominy; 1½ ounces of cream; and 3 teaspoonfuls of granulated sugar."

As the wave of under-feeding has gone all over the country with such intensity that most patients who are seriously ill are under-fed, it is with pleasure that we present these suggestions for a better feeding of the rheumatic patient. Although we do not understand the part that extra acidity may or may not play in rheumatism, it certainly seems unwise to give such patients meat or meat protein foods, but the above diet as suggested is certainly a wise one. If there is much indigestion from the extra amount of fats and starches present, and as it is known that two elements are at work to reduce the normal gastric acidity, *viz.*, the extra amount of fat and milk and the fever, it can do no harm to administer, after the milk foods, a few drops of dilute hydrochloric acid 3 or 4 times in 24 hours. Whether the infection generally enters the system through the tonsils or more frequently through the intestinal tract, has not been determined, but certain it is that the less indigestion the less irritants are absorbed into the blood, the less the temperature, the less headache, restlessness, sleeplessness, and kidney irritation. There is nothing in rheumatic fever that should prevent the patient from having toasted bread, with butter, if desired, more or less frequently, portions of oranges, lemonade, and some salt with his milk or cereals. It should also be remembered that a patient who is on a diet that contains no iron should certainly receive a daily small dose of it, as represented by one or two drops of the official tincture of iron, or by 0.10 to 0.20 gram (1½ to 3 grains) of reduced iron, sugar of iron, or carbonate of iron.

Especially important in many diseases, but we believe paramount in rheumatic fever, the bowels should be kept in perfect active condition. When the patient is first seen, he should be thoroughly purged with some cathartic; whether salts, calomel, or castor oil should be determined by the individual choice of the physician and the age of the patient. Even if the patient is eating but little food, there is, as Meara emphasizes, a normal excretion from the bowels. The lower intestine should certainly be considered as an excretory organ, and even the washing out of mucous secretion and watery and toxic exudates must benefit any patient. The laxative which shall be used after the first purging must be determined by individualizing; possibly many times an enema will be sufficient, but certainly thorough evacuation of the bowels always reduces the temperature and relieves the patient of secondary toxemia. However, as Meara well cautions, frequent catharsis with salines or other active drugs is inadvisable. Laxatives, such as typically represented by cascara or by aloin in some good combination, and enemas are better than frequent saline purging.

The specific treatment of this disease seems to be clinically proved to be salicylic acid in some form, and Meara believes that too little is often administered, and he consequently gives to an "adult of average weight 20 grains, in one or other form, every 2 hours for the first 24 hours during the waking period, or even 48 hours. In severe cases even 30 grains may be given for the first 2 or 3 doses. When the pain subsides, the dose may be cut down gradually to 15, to 10, or to 5 grains at a dose, how much and how rapidly depending on the progress of events or the signs of accumulation. The dose should be well-maintained at amounts of 10 grains every 2 hours until the active phases, as evidenced by fever, pain, and joint swelling, have passed." He then gives his patients from "5 to 10 grains, every 2 or 3 hours for a week or 10 days after the subsidence of acute symptoms, and from 4 to 6 weeks a lesser dose of 5 grains 3 or 4 times a day." Salicylism, *viz.*, roaring or singing in the ears even to deafness, full-headedness, dizziness, gastric disturbances, and perhaps skin eruptions, urticarial or erythematous in type, he does not consider of enough importance, ordinarily, to stop the use of the drug. Albuminuria and hematuria he thinks can be caused by the disease as well as possibly by the salicylates.

These doses seem large, and theoretically it would seem that if a patient were saturated with the drug enough for the above symptoms, that the amount given might be reduced to just enough not to cause these symptoms. If, as he suggests, salicylic acid combats the germ of rheumatic fever as quinin does the germ of malaria, it might be best to give the salicylate in a large overwhelming dose once, perhaps, every 24 hours, preventing the head disturbance with bromids, in the same manner as quinin is best administered in malarial fever. It should be emphasized that when large doses of salicylic acid or sodium salicylate are administered, synthetic preparations should not be used. Salol, phenyl salicylate, should never be pushed in any such method as suggested, as it carries with it a phenol element that is toxic.

Meara does not state, but it is quite possible that part of the great good accomplished by salicylates is due to the fact that they cause a great amount of perspiration and therefore a large elimination by the skin of possibly the products of the disease. This can sometimes be accomplished perfectly by other methods. The writer of this editorial has frequently seen acute rheumatism almost aborted and certainly shortened by a general "body-bake," the hot-air treatment. Certainly, whenever it is possible, the body bake presents a most satisfactory treatment of rheumatism. Whatever the treatment, the frequent sponging of the body with hot water to remove the profuse, sour perspiration and the salts and toxins excreted by the skin, is physiologic as well as esthetic. Such sponging should be done at least twice a day.

Whatever the treatment, a patient who is in pain from rheumatism has a right to have it stopped, and a small amount of morphin is better than a large amount of a coal-tar product. This is always true when pain is constantly recurrent. The repeated administration of any coal-tar preparation is inadvisable in acute conditions. It is often not necessary to give large doses of morphin, and as Meara suggests, ⅛ or even 1/16 gr., hypodermatically, conjointly with the administration of salicylic acid will often give relief. This should be repeated, when the pain is severe, as often as it is needed. As Meara says, the value of potassium iodid and colchicum in acute rheumatism is probably mythical.

Whether alkalies are of much value or not is still undecided. Such treatment has its believers and disbelievers. A little extra alkali administered at such times (especially if antacid) as not to interfere with digestion can do no harm and may do considerable good. Meara suggests bicarbonate of sodium in amount sufficient to cause the urine to become alkaline. Potassium citrate would seem to be the better drug, as rendering the urine more quickly alkaline and causing less disturbance of the stomach and digestion.

The care of the individual joints which are inflamed cannot be dogmatically dictated. The joint and limb should be placed in the position that gives the patient the most comfort. If several joints of a limb are involved, and especially if there tends to be more or less troublesome muscle contractions, or an inadvertent movement causes excruciating pain, a splint may be devised to keep the limb at rest. Whether cold applications or warm applications are the best for other joints, depends on the feelings of the patient. Too continuous cold is perhaps best not applied, as tending so to deteriorate the circulation of the part as possibly to do harm. Generally, warm, moist applications, and perhaps nothing better than alcohol fomentations (one part of alcohol to 3 or 4 parts of warm water; a towel or napkin soaked in this and then wrung out just sufficiently not to drip, and this wound around the joint and then covered with oil silk) will probably give as much comfort as any application. These should be changed as frequently as they are cold. Sometimes dry cotton around the joint causes as much comfort as any application. The official methyl salicylate may be applied, or oil of wintergreen, but probably neither is more valuable than the above alcohol dressing.

Later when the acute inflammation in the joint has subsided, but the inflammation tends to persist in certain joints, ichthyol applications are much used and seem at times to be efficient in hastening the absorption of exudates. Ichthyol may be used in from 10 to 25 per cent. mixture with glycerin, or with olive or other bland oil. When there is acute rheumatic inflammation in the joint, counterirritation is contraindicated, but when a subacute inflammation persists, either fly blisters or the actual cautery are certainly advisable, and as Meara says, the cautery is generally the best treatment and is best applied in striæ around and over the joint, not cauterizing deeply enough to blister, and repeated once in 3 or 4 days. To prevent ankylosis or stiffening of joints that have been immobilized once every 5 days, they should be removed from the splints and slight motion made, when such motion is not severely painful.

If cardiac inflammation occurs and if the heart's action is impaired as shown by irregularity or increased rapidity of the heart beat, Meara believes, as is the consensus of opinion, that salicylates should be stopped. If there is no disturbance of the heart beat Meara does not believe that inflammation of it, though positively evident from auscultation, necessarily contraindicates the use of salicylates.

Anemia which so often follows rheumatism is perhaps frequently due to abstinence from meat and the prolonged administration of salicylates and alkalies. The constant administration of iron throughout the disease and a not too long use of salicylates and alkalies will generally prevent this condition.

The convalescence following rheumatism should be prolonged until the patient is thoroughly able to attend to his work. If there is a cardiac complication, such a recommendation is positively necessary. It can never be determined how much endocardial inflammation was present, how much valvular inflammation and thickening will be permanent, or how perfect the repair of the heart may be. Also, even when auscultatory evidence of cardiac complication has not been discovered, there may have been some inflammation which should call for prolonged rest. The administration of small doses of an iodid, best sodium iodid, from 0.10 to 0.20 gram (from 1½ to 3 grains) three times a day, is often advisable. Such treatment has frequently seemed to hasten or aid in the complete recovery of endocarditis. Not every endocarditis from rheumatism leaves valvular lesions.

Meat does not cause rheumatism, and prolonged abstinence from meat is generally inadvisable, still but a small amount of purin foods should be taken for some time. Eggs, green vegetables, and cereals should constitute the main food; later, fish or meat once a day may be allowed.

It has been urged, to prevent recurrences of rheumatism in those who have had it, that a week of salicylic acid treatment should be given once a month for a few months and then once in six months for several times. General prophylaxis is accomplished by the same old story now so constantly preached, and referred to by Meara. There should be plenty of warm water bathing; people should not sleep in ill-ventilated, damp, musty rooms; the bed clothing should be daily aired. Such clothing should be worn as is suitable for the climate, season of the year, environment and occupation. Overweighting of the body with unnecessary clothing, causing profuse, sticky perspiration that remains as a wet poultice over the body, will not only not prevent rheumatism, but may even be a promoting cause of it, and as Meara states, "sore throats, stiff necks, and 'growing pains' in children" should not be neglected.

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[*For other information see second page following reading matter*]

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ROBERT KOCH AND HIS ACHIEVEMENTS

Robert Koch, once a country doctor, the discoverer of the bacillus of tuberculosis, and with the immortal Pasteur, the founder of bacteriology, and of the germ theory of infectious diseases, died May 27, 1910. In what better way can we honor the memory of this preeminent man and benefactor of the human race, at this time and in this place, than by recalling, even if only in an incomplete and fragmentary fashion, some of the principal results of his life and work so that we may realize more fully than perhaps is the case in general what the world owes to him!

Koch was born Dec. 11, 1843, in Klausthal, Prussia. In 1862, having finished the gymnasium, he began the study of medicine in the University of Göttingen. On the faculty at that time were Friedrich Woehler, who first produced uric acid synthetically; the physiologist, Wagner, who discovered the germinal area in the ovum; and Jacob Henle, the great anatomist, who strove to unify anatomy, pathology and physiology, and who made important discoveries in microscopic anatomy. It has been suggested that probably Henle especially influenced Koch, because he was one of the first who advanced the idea that "contagium" is endowed with individual life and reproduces itself, growing by assimilation of organic material as it lives parasitically in the diseased body; he held that the as yet unseen parasites would be found to be vegetable in their nature.

While still a student Koch published the results of two investigations, one concerning the presence of ganglion cells in the nerves of the uterus, and another dealing with the question of the development of succinic acid in the animal body. In 1866 he received the degree of Doctor of Medicine, passed the state examination, and was now for a short time assistant physician in the general hospital at Hamburg; then he entered general practice in Langenhagen in Hanover. At this time he seriously considered the question of coming to this country, where two of his brothers had already established themselves, and of taking up the practice of medicine in St. Louis. He soon moved to a small place, Rackwitz, in Posen, and in 1872 he became *Kreisphysikus* or district physician in Wollstein, where he remained until he was called to the Imperial Board of Health in Berlin, in 1880. During this time he was a busy country doctor, and yet he, the unknown man, was now carrying on investigations on anthrax and on traumatic infective diseases the results of which at once placed him in the front rank of investigators and made him a leader in the new science of bacteriology.

BACTERIOLOGY BEFORE KOCH AND THE EFFECT OF HIS FIRST EXPERIMENTS

In order to understand clearly Koch's rôle in the development of bacteriology, it is necessary to cast a glance at the state of the knowledge of the relation of microbes to disease as it was in the early seventies. It is true that Pasteur had shown that spontaneous generation was a chimera and had published epochal researches which, through Lister, gave us the life-saving boon of antiseptic treatment of wounds; and yet the road had not been wholly opened which bacteriologic investigation was to take in the near future, the road which has led to the modern discoveries in the causation of infectious diseases, their treatment and prevention. In this then virgin field Koch did pioneer service and cultivated it fruitfully to the end. At the time in question the connection between bacteria and infectious diseases seemed on the whole obscure and uncertain. There was no lack of advocates of the germ theory of infection; the great Billroth was trying ably to establish his *Coccobacteria septica* as the cause of wound infections; and Klebs had described his *Microsporon septicum* in purulent septic wounds, and introduced his fractional method of cultivation, but the actual cause of any of these conditions had not been established in a wholly satisfactory manner. The question whether the bacteria found in certain diseases were the cause of the disease or merely a consequence had not been settled. Many apparently contradictory results were being recorded and it is no wonder that doubt would arise in the minds of many as to the value of the germ theory of disease, when we consider that the results of some investigators indicated that the same disease might be caused by different bacteria and that the same bacteria might cause different diseases. Nägeli taught that the same bacterium was capable of existing in numerous forms with different functional powers, and as late as 1877 he wrote: "I have for ten years examined thousands of different forms of bacteria, and I have not yet seen any absolute necessity for dividing them even into two distinct species." No final solution of the difficulties in the way of further progress was offered until Koch appeared and supplied the methods and indicated the experiments that were necessary to furnish a thoroughly satisfactory proof of the parasitic nature of an infectious disease.

In 1876 he published his work on anthrax. Pollender and others had found rods in the blood of animals with anthrax, and the disease had been produced experimentally by inoculation with blood containing such rods; but it was still, at least in some places, a disputed question whether the rods were living things or not and whether they were the cause of the disease. Koch settled the first question by observing directly under the microscope in a hollow ground slide that if a trace of infected blood was mixed with broth, the rods in it would develop into long threads which under certain conditions would break up into minute glistening round bodies that in turn would give rise to rods like those originally found in the blood. By actual experiment, he showed conclusively that the rods as well as the rounded bodies, both of which he interpreted to be stages in the development of a single micro-organism, could cause anthrax. It is narrated that at this point Koch went to Breslau, bringing with him his microscope and white mice, for the purpose of repeating the experiments in the presence of Ferdinand Cohn, the botanist, Cohnheim, Weigert and others. The demonstration made a profound impression. Cohnheim is said to have told the workers in his laboratory:

“Let everything stand as it is and go over to Koch; this man has made a great discovery which in its simplicity and exactness of method deserves only the more admiration because he is cut off from all scientific connections and has himself worked out everything to absolute completion. There is nothing at all more to do. I regard this as a great discovery in the field of micro-organisms and I believe that Koch will surprise and outdistance us all again with further discoveries.”

Robert Koch, 1843—1910

Two years later appeared the classical investigations on traumatic infective diseases, in which Koch showed conclusively by cultivation in the body of animals that there are specific, pathogenic bacteria which cause sharply defined transferable diseases; that pathogenic power is not a general or common characteristic of bacteria, of which there are many kinds, which have distinctive peculiarities; that bacteria of even similar form may differ widely in biologic properties. The appearance of this work marks the definite beginning of the era of exact bacteriologic-etiologic investigation.

Having solved the general question whether bacteria produce disease, Koch now made special preparations for the search for the special bacteria of individual diseases. He unremittingly attempted to improve the means “for the discovery of pathogenic bacteria in animal tissues, because he could not get rid of the idea that the doubtful results of investigations with regard to the parasites of infectious diseases might have their foundation in the incompleteness of the methods used.” He greatly advanced the technic, especially by the introduction of Abbé's condenser, by the use of the homogeneous oil immersion lens and of the recently introduced anilin dyes for staining.

In 1879 Koch was called to Breslau as *Gerichtsarzt*, but evidently this work did not suit him, as he soon returned to Wollstein, remaining here only a few months, however, before he was called to the Imperial Board of Health in Berlin in 1880. Loeffler, who was Koch's first assistant in Berlin, gives the credit of having fully recognized Koch's genius and of giving it opportunity for full development to Struck, the first director of the board of health. Koch, with Loeffler and Gaffky as assistants, began his work in Berlin, in a small room with one window, but before long they moved into a larger room with three windows. The investigations on anthrax were continued; photomicrography and new cultural methods were developed; the current teachings in regard to disinfection were completely overturned, and new and improved methods for testing disinfectants were devised; corrosive sublimate and live steam as disinfectants were introduced. Now he also worked out the so-called plate method for obtaining pure cultures of bacteria from single organisms; by this simple method, which is one of the corner-stones of practical bacteriology, a ready and invaluable means was furnished for the isolation of a single bacterial species or strain from a mixture of many. When Koch demonstrated his transparent solid media and plate method at the Congress of Hygiene in London, in 1881, Pasteur exclaimed: “C'est un grand progrès”!

KOCH'S WORK ON TUBERCULOSIS

In the meantime Koch had begun his work on tuberculosis.

It may be noted that tuberculosis had long been regarded as an infectious disease; that Klencke in 1843 produced tuberculosis in rabbits by the injection of human tuberculous material into the veins; that Villemin a little later, by numerous systematic experiments, became the founder of the study of experimental tuberculosis; that Cohnheim and Salomonsen more recently, by inoculation of rabbits, in the anterior chamber of the eye, where they could follow the development of the tubercles step by step, had shown that various tuberculous substances contain the same infective material. Because of these results and because of his observations on anthrax and on wound infections, Koch had reached the firm conviction that tuberculosis also is a parasitic disease, and so he now proceeded with untiring patience and skill to search for the parasite. It soon became clear that the agent of tuberculosis differed from other bacteria and that different staining methods would be necessary to reveal its presence. Koch's own words give the best idea of the progress of the work:

> I commenced my investigations with materials in which the infectious agent surely would be present, as for instance, freshly developed gray tubercles in the lungs of animals which were killed three to four weeks after inoculation. Sections were made from lungs hardened in alcohol and examined with the best methods for the demonstration of bacteria. Gray tubercles were also crushed, spread out on cover-glasses, dried, and then examined for the presence of micro-organisms. All efforts to find bacteria or other micro-organisms in these preparations were without result. As it had been found in some of the earlier experiments that the addition of alkalies to the staining solutions in certain cases proved of special advantage in staining the bacteria deeply and differently from the surrounding tissue, this method was next used. Of the anilin dyes methylene blue permits the addition of the largest amount of alkali, and hence so much potassium hydrate was added to the watery solution of this dye as could be done without producing a precipitate. One cubic centimeter of a concentrated alcoholic methylene blue solution was mixed with 200 c.c. of distilled water and after repeated shaking 0.2 c.c. of potassium hydrate was added. When cover-glass preparations were treated for twenty-four hours with this staining solution, very fine rod-shaped forms were seen in the tuberculous material, which, as shown by further investigation, may multiply and form spores, and consequently belong to the same group of organisms as the anthrax bacillus. In sections it proved much more difficult to recognize these bacilli between the densely crowded nuclei and masses of detritus; consequently it was tried by the method of Weigert, who succeeded in staining anthrax bacilli in a different color from the surrounding tissue elements, to make the tubercle bacilli more distinctly visible by differential staining. This purpose was achieved by the use of a watery solution of vesuvin with which the blue stain cover-glass preparations and sections were treated until they appeared in a pure brown color to the naked eye. Microscopic examination now showed that only the previously blue-stained cell nuclei and their disintegration products had taken on the brown color, but that the tubercle bacilli retained a beautiful blue color, in consequence of which they were clearly differentiated from their surroundings, so that even in the densely crowded nuclear masses they were easily recognized. . . .
>
> The bacteria have a rod shape and consequently belong to the group of bacilli. They are very thin and from ¼ to ½ as long as the diameter of a red blood corpuscle, occasionally reaching a greater length up to the diameter of a corpuscle. They show in form and size striking similarity with the lepra bacilli. However, they differ from the latter in that they are a little more slender and appear pointed at the ends. And the lepra bacilli take the stain with Weigert's nuclear staining method, which the tubercle bacilli absolutely do not.

The next problem, to obtain the bacilli in pure culture, free from all the constituents of the diseased body, was brilliantly solved by the use of blood serum solidified at 65 to 70 C., on which the bacilli grew freely, and by the inoculations of animals to determine whether the pure cultures actually consisted of the tuberculosis parasite; he secured positive results in every instance.

The first announcement of this wonderful and epochal discovery was made March 24, 1882, in the Berlin Physiologic Society. The communication bore the title "On Tuberculosis." As Koch quietly, soberly and without apparent emotion presented the details of his discovery, everyone in the large audience felt the tremendous importance of the occasion; when he finished no one spoke and the session closed without discussion. In print this classical communication, which is one of the most important in the literature of medicine, occupies about two pages like these. The work they record will always excite special admiration because of the completeness of the proof that tuberculosis is caused by the bacillus which Koch found. Not a stone is missing in the great structure.

THE DISCOVERY OF THE COMMA BACILLUS

Continuation of work on tuberculosis was soon prevented because in 1883 Koch was sent to Egypt to study cholera, which threatened to invade Europe. As the Egyptian epidemic soon subsided, it became necessary to proceed to India, where he finally completed his discovery, in the characteristic choleraic intestinal contents, of the comma bacillus, which he brought home with him in pure culture. In the course of his studies of cholera he reached a clear notion of the mode of dissemination of this disease, which proved to be of the utmost importance in the development of practical preventive measures; he recognized that the patient is the principal source and carrier of the germs and that the secret of prevention of epidemics lies in prompt recognition of the first cases.

While in Egypt he made important observations on Egyptian conjunctivitis (Koch-Weeks bacillus) and on amebic dysentery. On his return in 1884, he received 100,000 marks from the German government. In 1885 he was appointed professor in the University of Berlin, and director of the newly established Hygienic Institute. Long before this time his laboratory was thronged with physicians from many countries, who wished to learn bacteriologic methods. The number of students now increased greatly and Koch's methods were carried to all parts of the world.

Of the work of the many assistants and pupils who have reached eminence and made great discoveries no mention even by name can be made at this time.

THE DISCOVERY OF TUBERCULIN

In the first communication on tuberculosis Koch pointed out that the multiplication of the bacillus is limited to the living body and that the spread of the disease is due to discharges from tuberculous persons and animals, especially cattle. Koch devoted years to the search for substances which would destroy the bacilli in the infected body, but in vain. He then sought to cure tuberculosis by means of substances derived from cultures of tubercle bacilli in glycerin broth, and in 1890, at the Tenth International Medical Congress in Berlin, he presented a communication concerning tuberculin ("old tuberculin"), which *created the greatest* excitement. Koch claimed for this substance that it was an excellent means of diagnosis of tuberculosis in animals as well as human beings, and that it also would prove to be, so he hoped, a means of cure in the early stages of tuberculosis. The expectations in regard to the curative power of tuberculin were carried beyond reason, not only by physicians, but by the general public, and when it was found that these expectations were not realized, there followed unjust condemnation not only of the remedy but of the discoverer himself. In 1896 Koch brought forward his "new tuberculin." Experience has now shown that Koch was right in his claim that tuberculin is a reliable diagnostic means and, according to the opinions of numerous conservative physicians, it also possesses, when properly administered, a definite *healing power in certain forms of* tuberculosis. In connection with the experiments on the immunizing action of tuberculin investigations were carried on in his institute on immunization with other substances, which eventually led to the marvelous discovery by Behring of diphtheria antitoxin and to the helpful work of Ehrlich on the principles of immunity.

INVESTIGATIONS ON RINDERPEST, SURRA, BUBONIC PLAGUE, ETC.

In 1891 Koch was appointed director of the newly founded Institute for Infectious Diseases in Berlin.

In 1896, he was asked to go to Africa to study rinderpest and, while he did not discover the cause of this disease, he did find a method by which the animals might be immunized, namely, by the injection of the bile of animals that have died from the disease. Now followed investigations by Koch and his assistants of bubonic plague in India, as well as in Africa; of surra, a tropical disease of cattle and horses caused by a trypanosome, which is transmitted by the much-feared tsetse fly; and of Texas fever, in which case he confirmed the discovery of Theobald Smith that the causative agent *(Piroplasma bovis)* is carried by a tick. Koch's sojourn in Africa led to highly important studies of malaria. The discovery that the malarial parasites develop in mosquitoes and are inoculated into human beings by their bite was made first by Ronald Ross; the independent investigations of Koch led to exactly the same results and filled certain gaps in the researches of Ross. Koch's discovery of the frequency of malarial infection in native children is most important, because of the light thus thrown on the source of tropical malarial diseases and on immunity in malaria. Koch also introduced a new idea of prevention of malaria in the tropics, namely, by the preventive administration of quinin to the people in malarial districts.

DISCOVERY OF THE LACK OF IDENTITY OF HUMAN AND BOVINE TUBERCULOSIS

During these years Koch continued, so far as possible, the work on tuberculosis, and in 1901 he announced that he had reached the conclusion that human and bovine tuberculosis were not identical. He had found that human tuberculosis, as a rule, could not be transmitted to cattle, which are highly susceptible to bovine tuberculosis, and that there existed noteworthy distinctions between the bacilli of the two forms of tuberculosis. He consequently urged the view that bovine tuberculosis plays a minor rôle in the development of tuberculosis in man and emphasized again, and strongly, that the chief danger to man is the human disease. This pronouncement roused a storm of opposition and led to extensive investigations. At present it seems as if his claim that the bacilli of human tuberculosis have but little infective power for cattle may be regarded as established; it also appears to be agreed that certain definite differences exist between the bacilli of bovine and human tuberculosis; but the difficult and much-discussed question in regard to the frequency of transmission of bovine tuberculosis to human beings still awaits a final answer. As the matter now stands it seems that tubercle bacilli of the bovine type may be found in human beings and probably oftener than Koch believed in 1901 to be the case; the comparatively small number of cases, however, in which such bacilli have been found, as well as the frequency of human tuberculosis in regions where bovine tuberculosis is absent, or where the infection of human beings from this source may be excluded, nevertheless appear to support Koch's conception of the dominating importance of infection from person to person in the spread of human tuberculosis.

PREVENTION OF TYPHOID FEVER AND OTHER DISEASES

Koch's studies on typhoid fever have led to a change in the conception of the mode of transmission and to new methods for its suppression. The key to this method is exact and early diagnosis in every case. Every person who shelters the bacillus is a source of danger to healthy persons in his environment and consequently he must be *placed under conditions that obviate this* danger. This is the same principle which Koch applied with such success to the prevention of cholera in Germany, which he recommended for the suppression of malaria and sleeping-sickness, and which he believed eventually would be applied to tuberculosis, syphilis and other infectious diseases.

In 1904 Koch studied various protozoan diseases in German East Africa, and in 1906 he visited the interior of Africa, for the purpose of studying sleeping-sickness and the prevention of its ravages. In 1905 he received the Nobel prize in medicine.

He was active almost to the end. In 1908 he visited the United States and took an active and effective part in the International Congress on Tuberculosis at Washington, especially in discussions and conferences concerning the relation of human and bovine tuberculosis, a problem on which he proposed to work on his return to Berlin.

THE WORLD'S DEBT TO KOCH

But death has claimed the master and the world has lost its leader in the struggle against infection. Endowed with a mind of the first order, and animated, beneath a quiet, impassive and meditative exterior, by a spirit of unceasing but wonderfully well-regulated activity, which drove him on as by an internal fire from achievement to achievement, he made his own age preeminent over all the ages that have gone before for advances in the exact knowledge of the causation and prevention of infectious diseases. Rarely, if ever, have so many discoveries of such decisive importance to mankind emanated from the activities of one person; yet he served with all humility of mind. He simply tried to do his duty, being, as he said, fortunate to find sometimes the gold among the gravel of the road which is open to everyone. When we consider the advancement medicine owes to Robert Koch and the endless and inestimable blessing which has come to mankind through his work and life, there comes an overpowering sense of admiration, reverence and gratitude.

THE AMERICAN MEDICAL ASSOCIATION CALLED A TRUST

"Trust" is a good word to juggle with nowadays, for to most people it conjures up visions of extortion, robbery and general oppression. When, therefore, any organization is to be attacked and there are no tangible charges to be preferred against it, it is dubbed a "trust" and by that very token is damned in the premises. In this manner the American Medical Association becomes the "doctors' trust" according to the "National League for Medical Freedom"—and other organizations with equally high-sounding and misleading names, fathered by the "patent medicine" interests. Not that the term originated with this widely advertised "league," although some fifteen or sixteen years ago the president of this "league" attacked the medical profession in a magazine article on "Medical Monopoly." The representatives and mouthpieces of the proprietary interests have long employed it; notably Strong through his two journals, the *National Druggist* and the *Medical Brief*, and Engelhard through his journals, the *Western Druggist* and the *Medical Standard*. As the proprietors of these publications are found among the *personnel* of the "league" it is natural that this latest "patent medicine" organization should have appropriated a figure of speech possessing such magnificent potentialities.

To the proprietary men the American Medical Association is a trust because, they allege, it has attempted to dictate to physicians what medicinal preparations they shall and shall not use; or to put it more baldly, because the fraudulency and worthlessness of various proprietary products have been made clear in The Journal. Others have accused the Association of being a trust because it has attempted to raise the standard of medical education and thereby to "control the output of medical students." But the reason advanced by the "league" is a brand-new one, invented, no doubt, in the hope that it will reach the public's heart through its most direct route—the purse. The American Medical Association is a trust, we are told, because it has established a schedule of prices by which all its members are bound. The president of the "league" is reported as saying:

> "The [American Medical] Association now fixes the prices charged by physicians in America."

More specifically the "league's" vice-president puts it:

> "The American Medical Association has secured the adoption of its scale of prices throughout the country. . . ."

To such a charge there is but one answer and that an all-sufficient one, *viz.*, that it is a falsehood and a stupid one at that. Every physician, and every layman who has ever investigated the matter, knows that as a matter of fact the American Medical Association has never even suggested that the "price" of medical service be "fixed," but on the contrary, has positively discouraged such a proposition. The recommendation in the Principles of Medical Ethics that individual physicians in any locality should adopt some general rules "relative to the minimum pecuniary acknowledgement from their patients," has been taken and an attempt made to read into it a meaning never intended and certainly never accepted. What the attitude of the Association is on this point is well set forth in the standard "Constitution and By-Laws for County Societies" prepared by a committee of the American Medical Association and recommended and very generally adopted by various county societies:

> "Sec. 3.—Agreements and schedules of fees shall not be made by this society. . . ."

And yet the falsehood is blazoned forth, with a prodigal disregard for the expense entailed, by means of display advertisements and "interviews," that the American Medical Association "fixes the price" of medical service. Of course, the "league" had to have some shibboleth and the accusation that the American Medical Association is a "trust" is an untruth that may be counted on to arouse the interest of the unthinking and to give a more or less plausible excuse for the "league's" existence. How absurdly mendacious the accusation is the medical profession already knows and the public will not be long in learning.

Again we say: The publicity which the "patent medicine" interests are giving to the American Medical Association through this "league" is welcomed. The more the people know about the Association and the work it is doing, the keener the investigation made of its methods and aims, the better it will be not only for the American Medical Association and the medical profession of the country, but also, more important than all, for the public itself.

POISONING BY SUBLIMATE TABLETS

The recent publication[1] in The Journal of reports of several instances of fatal poisoning from the introduction of bichlorid of mercury tablets into the vagina has aroused some discussion of the growing danger from the promiscuous sale and increasing use of these convenient antiseptic preparations. In this connection the recent review of the cases of sublimate poisoning which have occurred in the German Empire during the years 1897 to 1905,[2] will undoubtedly have much interest.

By official action all cases of poisoning with bichlorid of mercury since 1897 have been reported to the governmental health office, and from the reports submitted the above-mentioned review has been compiled. It will undoubtedly cause some surprise that in the entire German Empire there occurred during nine years but one hundred and one cases of poisoning with bichlorid of mercury dispensed in tablet form, and twenty-three from sublimate sold as the powder or crystals, and this, in spite of the known prevalence of suicide in that country. Of the one hundred and one instances of poisoning with bichlorid tablets, no less than ninety-two were attempts at suicide, the other nine being accidental poisonings; there was no instance of the use of mercury for the purpose of murder, nor is there any record of poisoning from the introduction of tablets into the vagina as has been mentioned above. The mortality was not so high as might have been anticipated, fifty-eight persons dying while forty-three recovered, in spite of the fact that most of these were cases of suicide, in which therapeutic intervention is not usually so prompt as in accidental poisoning. The greater inclination of women to commit suicide by poison rather than by more violent means is brought out by these tables, for in thirty-four cases in which the sex is recorded twenty-five women and but nine men used bichlorid of mercury with suicidal intent.

Compared with the tablets, bichlorid of mercury in the unmodified form is a rare source of serious poisoning, however often it may lead to slight local or constitutional symptoms in persons using it frequently. There were but twenty-three cases of poisoning by this form of mercury during the same nine years. Of these, sixteen were suicidal and six accidental, including under the latter two cases in which fatal poisoning followed injections of sublimate solution for the purpose of producing abortion. In any case it is evident that bichlorid of mercury as compared with compound solution of cresol, phenol, and even phosphorus, is not a popular poison for suicidal purposes in Germany. During the nine years under consideration there were reported in Prussia alone 2,895 suicides by poison, of which but thirty-six or 1.2 per cent. were from antiseptic tablets containing sublimate.

We have a distinct impression that poisoning by this agent, especially accidental poisoning, is much more frequent in this country than these figures show it to be in Germany; unfortunately there is no way of learning the exact conditions in America because of our laxity in the matter of vital statistics. There is every reason why we should have more poisonings by bichlorid tablets than the Germans have, for here almost anyone can secure a bottle of them at any time, and almost every household has a partly used bottle in some cupboard inviting mistaken administration by self-drugging adults, or accidental assimilation by inquisitive children. In Germany, however, it is not so easy to buy or unintentionally to poison oneself with bichlorid tablets, because of the enforcement of rigid laws regulating their sale. Among the legal provisions are the following: For medical purposes sublimate tablets can be sold only by apothecaries, and only on the presentation of a dated and signed order from a regular physician; each tablet must contain a soluble red anilin dye, and it must be enclosed separately in a black paper on which is printed the word "poison" in white letters, in addition to the usual regulations concerning the marking of the containers.

With such regulations in force it is easily understood why only one accidental poisoning occurs annually in Germany from this source, and that a suicidally inclined person will have some trouble in securing this particular means of escape from life's cares. As a matter of fact, a remarkably large proportion of those who did take bichlorid with suicidal intent were nurses, midwives, servants of doctors, and others who could procure the antiseptic tablets readily—a fact which shows how efficient the German laws are in keeping this particular poison from being improperly used by the general public. The conclusion reached by the official who investigated these statistics for the governmental health officers is that the existing regulations have proved themselves so efficient that there is no need for any further restriction being placed on the use and sale of bichlorid of mercury tablets, in view of their well-established usefulness. It is a pity that we have no available statistics in this country for a similar study; it is reasonably certain that the inevitable conclusion would be that in this country there is urgent need for the adoption and enforcement of regulations similar to those which have so effectively protected the German public.

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[1] Lankford, Burnley: A Peculiar Case of Mercurial Poisoning, The Journal A. M. A., April 9, 1910, p. 1203; Sharp, W. H.: The Careless and Criminal Use of the Mercuric Chlorid Tablet, The Journal A. M. A., April 30, 1910, p. 1458; Patek, A. J.: Poisoning by Mercuric Chlorid Through Vaginal Douches, The Journal A. M. A., June 4, 1910 (this issue), p. 1867.

[2] Franz, F.: Die im Deutschen Reiche während der Jahre, 1897-1905, amtlich gemeldeten Vergiftungen mit Sublimat, insbesondere mit Sublimatpastillen, Arb. a. d. k. Gsndhsamte, 1910, xxxiv, 1.

Tefft Memorial Services.—Memorial services in honor of the late Dr. Jonathan E. Tefft were held by the Greene County Medical Society, at Springfield, May 13. A number of addresses were made and the medical library of Dr. Tefft was presented to the society by his widow.

Graduating Exercises.—At the graduating exercises of the University Medical College, Kansas City, held May 13, a class of forty-seven received diplomas. Rev. Cyrus Townsend Brady delivered the doctorate address and Dr. Jabez N. Jackson presented the diplomas and awarded the prizes.

Medical Secretaries Meet.—At the second annual meeting of the Missouri Society of Medical Secretaries, held in Hannibal, May 3, the following officers were elected: President, Dr. George W. Goins, Breckenridge; vice-presidents, Drs. Bert B. Parrish, Kirksville; Vincent O. Williams, Nevada, and secretary-treasurer, Dr. Charles Wood Fassett, St. Joseph. The next meeting of the society will be held in Jefferson City on May 11. Dr. Frederick R. Green, assistant secretary of the American Medical Association, was a guest of the society and delivered an address on "Medical Reorganization—Past and Present."

St. Louis

Personal.—Dr. John C. Morfit has been appointed first hospital commissioner under the new hospital commission.——Drs. Major G. Seelig, Willis B. Young and Harvey G. Mudd have been appointed members of the surgical visiting staff of the new St. Louis City Hospital, and Drs. George C. Crandall, Carl J. Luyties and Elsworth Smith, Jr., members of the visiting medical staff.

Commencement Exercises.—The commencement exercises of Barnes University Medical Department were held in St. Louis May 16. A class of fifty-one received diplomas from Dr. Alonzo R. Kieffer, dean of the faculty. The doctorate address was made by the Rev. W. M. Wilkinson and the honorary degree of Doctor of Medicine was conferred on David C. Morrow, secretary of the dental department.

Fraternity to Meet.—The second international meeting and dinner of the Alpha Omega Medical Scholarship Society will be held under the auspices of the Washington University Chapter at the St. Louis Club, 3663 Lindell Avenue, at 6:30 Tuesday evening, June 7. The tickets are $2 and members may bring friends. Announcement will be made at this meeting of the time and place of a special meeting of delegates to be held later.

MONTANA

Hospital Opened.—The Geiger Building, Libby, has been fitted up by Drs. E. F. Coyningham and Robert Auld. It will be known as the Libby General Hospital.

Personal.—Dr. Willard A. Long, Lewistown, with his wife and daughter, sails for Europe June 11. Dr. John T. Foley will act as health officer during the absence of Dr. Long.

State Board of Health Meeting.—At the annual meeting of the State Board of Health, held at Hunters Hot Springs, May 10, the following officers were elected: Dr. Samuel E. Leard, Livingston, president, and Dr. Thomas D. Tuttle, Helena, secretary.

NEBRASKA

Tuberculosis Camp Project Abandoned.—The opposition of property owners has resulted in the abandonment of the project to establish a tuberculosis hospital at Pries Lake, north of Florence.

County Medical Society Meeting.—Cuming County Medical Association at its annual meeting held in West Point, elected Dr. Harry W. Francis, Bancroft, president, and Dr. Harry L. Wells, West Point, secretary.

NEW YORK

Charities Aid Report.—The thirty-seventh annual report of the Charities Aid Association has just appeared. Legislation creating the Board of Ambulance Service for Greater New York was one of the reforms obtained by the association. The society also aided in the effort to obtain ambulance relief stations in three different sections of Greater New York. Two bills have become laws, one authorizing the establishment of county hospitals for tuberculosis, and the other providing for the ambulance service of New York City. They also drafted a bill providing for the more adequate treatment of intoxica- tion and inebriety in this city, but the bill failed of passage. Owing to the increase of the association's work for children there was a deficit of $2,500 in the general fund.

Heavy Cost of the Insane.—According to the statement issued by the state controller recently, the largest item of expenditure during the past ten years has been for the support of state hospitals for the insane. During the last decade this expenditure amounted to $54,018,361. The state lunacy commission reports that during the last year 6,474 patients were received into the state hospitals and 23 per cent. as many were discharged, recovered. The total number now under treatment is 31,000. Dr. Albert Warren Ferris, New York City, president of the state lunacy commission, read a paper at the annual meeting of the American Medico-Psychological Association urging certain preventive measures to be inaugurated immediately, as they would result in great saving to the state.

Buffalo

Section Officers Elected.—The section of medicine of the Buffalo Academy of Medicine has elected Dr. Lesser Kauffman, chairman, and Dr. Carl S. Tompkins, secretary.

Law Against Spiritualists and Clairvoyants.—As the result of the acquittal of Mrs. Lane, a spiritualist or clairvoyant, Erie County Medical Society has had drawn a bill for the purpose not only of stopping the practice of spiritualists and clairvoyants, but with the intent to put a stop to all mental healers who practice for money consideration. The bill provides that every person practicing the healing art must have a diploma. The bill has been passed by the general assembly.

Care of Insane Before Commitment.—The report of the committee appointed by the Buffalo Academy of Medicine on the care of the insane prior to commitment shows the need of improvement in the methods in vogue in the state. Although the best care should be taken of the insane, the fact still remains that more than 37 per cent. of the men and more than 10 per cent. of the women committed to the Buffalo State Hospital have been sent from jails and police stations. The committee found many instances of long delays and lack of considerate care, neglect and improper provision.

OHIO

Governor Refuses Optometrists.—In spite of the efforts of a committee of the Ohio Optical Association, headed by the vice-president, Governor Harmon has refused to reconsider his veto of the Dean Optometry Bill.

Personal.—Dr. Francis P. Corrigan, Cleveland, has returned from Europe.——Dr. Asa C. Messenger has been appointed health officer of Xenia.——Dr. Louis F. Bucher has been appointed medical inspector of the Board of Education of Dayton, and Dr. John W. McKenny has been appointed a member of the board.

College Commencement.—The third annual commencement exercises of Starling-Ohio Medical College, Columbus, were held May 18, when a class of 39 was graduated. President W. C. Thompson of the Ohio State University delivered an address and conferred the degrees and Oscar T. Corson, formerly State School Commissioner, delivered the commencement address.

Damages Against Physician.—In the case of Mrs. Sarah V. Palmer against Dr. William H. Humiston, Cleveland, in which it was alleged that, after a surgical operation, the defendant had allowed a gauze sponge to remain in the wound, which was removed six months later by another operation, a verdict of $5,000 damages is said to have been awarded the plaintiff, April 30.

School for National Guard Medical Officers.—A school for medical officers of the Ohio National Guard will be held in Columbus, June 8 and 9. The instructors, who are all of the Medical Corps of the Army, are Major Edward L. Munson, Fort Leavenworth; Major Charles R. Reynolds, Fortress Monroe; Major Henry C. Fisher, Columbus Barracks, and Capt. W. Henry Pipes, Washington, D. C.

Societies Meet.—The physicians of Salem met April 25 and organized the Salem Physicians' Club, with Dr. Andrew W. Schiller, president, and Dr. Paul E. Barckhoff, secretary.——At the meeting of the Ohio Alumni of Jefferson Medical College, held in Toledo, May 12, Dr. Albert W. Fisher, Toledo, was elected honorary president; Dr. Richard S. Gaugler, Dayton, president; Dr. Silas W. Fowler, Delaware, vice-president, and Dr. Fred Fletcher, Columbus, secretary and treasurer.

In the Hands of the Law.—Dr. John C. Snyder, Bowling Green, is said to have been convicted in the probate court of the illegal prescription of liquor to a detective named Collier, and to have been fined $250 and costs. However, $200 of the fine was suspended until further order of the court.——Dr. Jacob F. Wallom, Jerry City, charged on several counts of selling liquor in violation of the law, was discharged April 29. ——James M. Laburg, Miamisburg, whose certificate is said recently to have been revoked by the state medical board on the charge of unprofessional conduct has been granted a new trial by the governor and attorney-general sitting as a court of appeal.

Cincinnati

Personal.—Dr. Robert D. Mussey, receiving physician of *the City Hospital*, has resigned to accept a position in Rochester, Minn., and has been succeeded by Dr. Charles Howard.——Dr. J. C. Cadwallader, for fifteen years health officer of Norwood, has resigned and has been appointed chairman of the board of health; Dr. Frank Perry has been appointed health officer and Dr. Louis Sauer district physician.——Dr. Simon P. Kramer has sailed for Europe.——Drs. William E. Lewis, professor of anatomy, Charles L. Metz and Moses Salzer, demonstrators of anatomy, Grear Hill Baker, demonstrator of biology, Walter R. Griess, lecturer on applied anatomy, and Henry L. Woodward, demonstrator of embryology, have left the faculty of the Ohio-Miami Medical College. It is reported that a new head of the department from an eastern college is to be appointed who is expected to select his own staff.

OKLAHOMA

Protective Association Organized.—The Tilman County Physicians' Protective Association was organized at Frederick recently and the following officers were elected: Dr. Fred G. Priestly, president, and Dr. Adam B. Fair, secretary, both of Frederick.

OREGON

Commencement.—The Medical Department of the University of Oregon, at its annual commencement exercises, May 2, graduated a class of fifteen. Hon. Abbott Low Mills delivered the annual address, President P. L. Campbell conferred the degrees and presented the Saylor and anatomy medals, and Dr. Edmund J. Labbe delivered the charge to the graduating class.

New Hospitals.—Granite City Hospital, with a capacity of 50 patients, a new hospital of solid concrete construction, and which has cost about $40,000, was formally opened in Ashland, April 30.——Mrs. Millie Trumbell, Portland, is agitating actively the matter of an emergency hospital for Portland, to be located in the new Multnomah County Courthouse. She is also advocating the instruction of the police in first-aid to the injured.——Ground is reported to have been secured for the erection of a hospital for Chinese in Portland and $40,000 has been subscribed for the institution.

PENNSYLVANIA

Personal.—Dr. J. Budd Rees has resigned as resident physician at Pottstown Hospital.——Dr. Edward R. Myers has been elected president of the board of health of Pittston, and Dr. Edward F. McGinty a *member of the board*.

State to Care for Tubercular Children.—Announcement was made by Dr. Samuel G. Dixon, State Commissioner of Health, May 24, that a special department for tubercular children is being established at Mount Alto and that separate children's clinics will be held at the dispensary every Saturday from 1 to 4 p. m. Dr. Charles Weber, an expert on diseases of children, has been appointed to examine and look after these patients. Cases among children will be reported by the public school authorities, and the new children's building at Mount Alto will be utilized to take care of the more advanced cases.

Tuberculosis Notes.—Berks County Tuberculosis Sanatorium on Neversink Mountain, opened for the season, May 12, with accommodations for fifteen patients.——At a meeting held in Erie, May 13, a local branch of the state society for the prevention of tuberculosis was organized. Drs. John W. Wright, Edward Cranch and George B. Kalb were elected vice-presidents.——A contract has been awarded by the State Department of Health for the erection of a group of buildings conisting of a dining hall, infirmary, nurse's home, physician's ouse and ward building, at the State Sanatorium, Mount Alto, the cost of the buildings to be $106,000.——A contract as been awarded for the building of an addition to the Hometead Hospital, to be three stories in height, of brick, and to ost about $10,000.

Philadelphia

Gone to Europe.—The following physicians have sailed for Europe: Drs. J. Nicholas Mitchell, Alfred Bernstein, and Howard T. Karsner.

Bequests.—The will of the late John H. Converse bequeathes 25,000 to the Presbyterian Hospital.——By the will of the late Samuel E. Shoyer, the Jewish Hospital receives a bequest of $5,000 for the establishment of a free bed in memory of Gabriel and Louisa Shoyer.——The will of the late Lucinda Dodson devises $8,000 in trust for the benefit of Albert B. Dodson and at his death $5,000 is to be given to the Methodist Episcopal Hospital to endow one or more free beds.

Hospital Staff Appointed.—Dr. Joseph S. Neff, director of Health and Charities, appointed the following staff of visiting physicians at the Tuberculosis Hospital, Byberry: Drs. Ward Brinton, Samuel Rhoads, Arthur C. Morgan, Daniel M. Hoyt, Edward J. G. Beardsley, Joseph V. C. Roberts, J. Clinton Foltz, and J. Willoughby Irwin. The plan of the department is to receive from the various hospitals of the city, all those cases of consumption, among the deserving poor, that are moderately advanced—that is, those for whom there is the slightest hope of recovery—and there keep them under the direct care of visiting physicians. Dr. Henry Sykes, chief resident physician, has sent examining blanks to all the city hospitals and on May 27 10 patients were sent from the Philadelphia General Hospital and 6 from Jefferson Medical College Hospital.

Furthering the Baby-Saving Campaign.—To further the plans of last week for the baby-saving campaign this summer, another meeting was held at Dr. Neff's office at City Hall on May 20 and the following committee was appointed: Dr. Jesse D. Burks, director, Bureau of Municipal Research; Miss Lucy Davis, secretary, Visiting Nurse Society; Dr. Samuel McC. Hamill, Pediatric Society; Miss Anna Jeffries, superintendent, St. Christopher's Hospital for Children; J. Percy Keating, vice president, Society for Prevention of Cruelty to Children; Miss Mary V. Kemp, Church House Settlement; Porter R. Lee, general secretary, Society for Organizing Charity; the Rev. H. Cresson McHenry, assistant superintendent, Protestant Episcopal City Mission; J. Prentice Murphy, superintendent, Children's Bureau; Mrs Solomon Selig, Juvenile Aid Committee; Dr. Louis Starr, Mrs. E. Boyd Weitzel, president, Country Week Association. Mayor Reyburn forwarded a message to Councils asking that $5,400 be appropriated immediately toward the establishment of a Division of Child Hygiene, under the Department of Health and Charities. All through the 18 schools of the second, third, fourth, fifth, sixth and seventh wards, lectures under the joint supervision of the Bureau of Health, the Visiting Nurses and the Bureau of Municipal Research, were given by Dr. Neff's medical inspectors, assisted by the school nurses, May 26. These were simple practical talks to the little girls, on the care of babies, the proper way to dress them and most important of all—the care of their milk and bottles. It is hoped that these "little mothers," who practically have full charge of the babies of their families will carry out these precepts. The work which will center in the two downtown wards where the death rate among babies is highest, will begin June 1. Every house where a birth is reported or where a baby is known to live, will be visited and advice and instruction will be given to the mother. In order to facilitate prompt notification of births, Dr. Neff has planned to have reports of births sent informally by postcard or telephone within 24 hours to the Central Registration Bureau, instead of waiting for the allowed 10 days. In a house where there is no regular attending physician, the nurse will leave an addressed postal card, which can be used to notify the Health Department in case of the baby's illness. Upon receipt of such notification, the department will investigate through one of its physicians and the physician and nurse will render assistance as long as may be necessary.

VERMONT

Personal.—Dr. Everal C. Haviland, first assistant physician of Brattleboro Retreat, has resigned.——Dr. James D. Tanner, Burlington, sailed for Europe, April 23.——Dr. Clarence F. Ball has been reappointed health officer of Rutland.

State Board Meeting.—The State Board of Health in Rutland, May 12, decided to hold the summer school for health officers in Montpelier during the first week in August, and to discontinue, for the season, the tour of the tuberculosis exhibit.

VIRGINIA

Buildings for Epileptic Colony.—The board of trustees of the state epileptic colony of Amherst County near Lynchburg, expects to have its work well under way by September 1. The present three buildings on the farm will be utilized, one as a cottage for inmates, one as an administration building and a third for farm employees. Plans for a new building have been accepted and the building will be ready for occupancy by the end of the year.

GENERAL NEWS AND COMMENT

Medical Librarians' Meeting.—The Medical Library Association will hold its thirteenth annual meeting in the Southern Hotel, St. Louis, June 6 and 7, under the presidency of Dr. John H. Musser, Philadelphia. The association will discuss matters relative to libraries and library movements.

Gastroenterologists to Meet.—The thirteenth annual meeting of the American Gastroenterological Association will be held in St. Louis, June 6 and 7, at the Planter's Hotel, under the presidency of Dr. Julius Friedenwald, Baltimore, the subject of whose address will be "Recent Events in the Development of Gastroenterology."

Harvard Alumni to Meet at St. Louis.—Harvard alumni attending the American Medical Association meeting at St. Louis will meet at the University Club for dinner, at 6:30 p. m., June 7. Dr. John Green will act as toastmaster. There will be a desk for registration at the general headquarters in the Southern Hotel, where the Alumni are urged to register. Dr. Nathaniel Allison, 609 Metropolitan Building, is in charge of the arrangements.

Meeting of State Medical Examining Boards.—The twentieth annual convention of the National Confederation of State Medical Examining and Licensing Boards will be held in the Southern Hotel, St. Louis, June 6, under the presidency of Dr. Augustus Ravogli, Cincinnati, the subject of whose address is "A Plea for More Practical and Extended Clinical Instructions for Medical Students." The matter of combining the American and National confederations will come up for action before this meeting.

Frisco Surgeons Meet.—The ninth annual convention of the Frisco System Medical Association was held in Springfield, Mo., May 16 and 17. St. Louis was selected as the place of meeting for 1911 and the following officers were elected: President, Dr. Elijah J. Neathery, Sherman, Texas; vice-presidents, Drs. William S. McDonald, Fort Scott, Kan., and James R. Dawson, Birmingham, Ala.; secretary, Dr. Stanton K. Crawford, St. Louis (reelected); treasurer, Walter A. Camp, Springfield, Mo. (reelected), and Dr. William Britt Burns, Memphis, Tenn., member of the executive committee.

Conference Regarding Feeble-Minded.—The thirty-fourth annual conference of the American Association for the Study of the Feeble-Minded was held at the Lincoln (Ill.) State School and Colony, May 16 to 18. The following officers were elected: President, Dr. Arthur R. T. Wylie, Faribault, Minn., vice-president, Dr. Harry G. Hardt, Lincoln; secretary and treasurer and editor-in-chief of the *Journal of Psycho-Asthenics*, Dr. A. C. Rogers, Faribault, Minn., and associate editors, Drs. Walter E. Fernald, Waverly, Mass.; Martin W. Barr, Elwyn, Pa.; George Mogridge, Glenwood, Iowa; Arthur R. T. Wylie, Faribault, Minn.; H. H. Goddard, Vineland, N. J.; Harry G. Hardt, Lincoln, Ill., and Charles S. Little, Laconia, N. H.

Prevention of Infant Mortality.—At the annual meeting of the American Association for the Study and Prevention of Infant Mortality, to be held in Baltimore November 10 and 11, the session on Municipal, State and Federal Prevention will be in charge of Dr. Wm. H. Welch, Baltimore, chairman, and Dr. John S. Fulton, Washington, D. C., secretary; the session on Medical Prevention will be presided over by Dr. L. Emmett Holt, New York City, with Dr. Philip Van Ingen, New York City, as secretary; Dr. Helen C. Putnam, Providence, R. I., will preside over the session on Educational Prevention and Prof. Abby Marlatt of the University of Wisconsin will be secretary, and Hastings H. Hart, New York City, will be in charge of the session on Philanthropic Prevention.

LONDON LETTER

(From Our Regular Correspondent)

London, May 14, 1910.

The Death of King Edward

The death of the King, after a brief illness, on May 6, in his sixty-ninth year, has fallen as a heavy blow on all his subjects throughout his vast empire. We realize that we have lost a ruler of exceptional merits whose one idea was the service of his people by the promotion of peace among nations. With what skill he worked for this ideal and attained a title which has never been borne before, "the world's peacemaker," is well-known. His success depended not on intellectual greatness but on a personality of singular charm. He has been well described as "The kindest man who ever wore a crown." He always took a great interest in the profession of medicine and he was a staunch friend of it. In collecting funds for the hospitals he was foremost. He founded the "King Edward's Hospital Fund" from which large grants are made every year to all the London hospitals. In the scientific aspects of medicine he was also deeply interested. As Prince of Wales he presided at the last International Medical Congress held in London and his interest in the problems of tuberculosis and cancer are well-known. In the anti-tuberculosis campaign he made the epigrammatic remark which has often been quoted: "If preventable why not prevented." Speaking of cancer investigation he said that the man who discovered a cure for that dire disease deserved to have a statue erected to his memory in all the capitals of the world.

The Treatment of Cancer

The practice of the Cancer Hospital, London, is of interest as showing the results of the latest methods of treating cancer. The electrical department is well-equipped with apparatus for the *x*-rays, ionic medication, high-frequency currents and radium therapy. Last year nearly 2,000 treatments were administered. As before, the *x*-rays have been found to alleviate a considerable number of cases but no cures can be claimed. The use of the high-frequency currents is limited to the relief of pain. Ionic medication has given good results in some cases but it has failed in extensive, inoperable and internal cancer. At a cost of $1,000 20 milligrammes of radium have been obtained. In superficial cancer radium has given good results and certain cases can be claimed as cured. But in the deep-seated cases of advanced growth all that has been obtained is temporary checking of the disease and relief of pain. The trypsin treatment for which so much was claimed has proved a complete failure. The same is true for the serum of Doyen of Paris. In spite of these results, however, the fact that in rare cases (estimated to be somewhat less than 1 in 1,000) cancer undergoes spontaneous cure, that in others the natural resistance of the body to the growth of cancer is great, and that Nature by means of fibrosis and sloughing attempts to get rid of the disease seem to give hope of the discovery of a cure, and point to a serum treatment. At present another serum treatment is being tried.

Disappearance of Yellow Fever from the West Indies

Prof. Rupert Boyce, who has just returned from Jamaica, reports that the old-time scourge of the West Indies has practically disappeared. About the year 1850 the introduction of water-pipes in nearly all the principal towns did away with the necessity for wells, vats and barrels, the breeding-places of the stegomyia, greatly reducing its numbers and the number of cases of yellow fever. Professor Boyce states that whenever an appreciable, though not necessarily a complete reduction in the number of stegomyia, is brought about in a district, from that time yellow fever ceases to be endemic. In short, a certain excess of this mosquito appears necessary to maintain continuous infection or endemicity; short of that number endemicity disappears. But if by chance a case of yellow fever should be imported from some distant center in Central America, where the disease is still endemic, then a smaller or larger outbreak will occur, limited in extent by the number of stegomyia existing in the particular district. These outbreaks, despite increasing commercial relations, are every year becoming less frequent and smaller.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 13, 1910.

Physicians in the Chamber of Deputies

The new Chamber of Deputies, elected on April 24 and May 8, comprises 597 deputies, among whom are 49 physicians. In the former chamber there were only 591 deputies, of whom 54 were physicians. This proportion appears larger, because the other professions, except those of law and journalism, are represented by much smaller numbers. Among the new deputies there are only 13 pharmacists. There are, however, about 120 lawyers. A well-known publicist, M. Henry Maret, who never fails to disparage physicians a little, asks why there are so many lawyers and physicians, and goes on to say that it is easy to understand why there are so many lawyers; it is their business to understand the law and it is natural for them to be called on to make laws; but, he asks, what relation has the medical profession with the conduct of the governmental affairs? Literature, it has been wittily said, leads to everything, provided one forsakes it. "Just as good writers keep out of politics," M. Maret remarks, "the best physicians are not those who become legislators."

There may be some truth in this observation; but medicine and social hygiene are called on to play an important rôle in modern legislation. The medical profession, moreover, h furnished some eminent men to politics. Two former premiers, who played a considerable rôle in recent years, M. Combes and M. Clemenceau, were medical men. One of the most prominent members of the last legislature, M. Fernand Dubief, former vice-president of the Chamber of Deputies, who has twice been a minister, is likewise a physician, and consequently took an active part in legislation requiring special knowledge along this line, such as the laws on industrial accidents and reform of legislation in regard to the insane, etc.

The Jubilee of Dr. Gellé Père

In one of my previous letters (THE JOURNAL, March 26, 1910, liv, 1069) I mentioned the formation of a committee to take charge of the celebration of the jubilee of Dr. M. E. Gellé. This ceremony took place, under the presidency of Dr. F. Raymond, professor at the Paris college of medicine, and many otologists were present, colleagues, pupils and friends of Dr. Gellé. Letters of congratulation were read from Austrian, Belgian, Spanish, Italian, Dutch and Roumanian otologic societies. At the close of the ceremony, Dr. Gellé was presented with an artistic medal, bearing his own portrait, the work of A. Boucher.

A Victim of Medical Duty

M. Neyraud, intern under Dr. Donnet, professor of clinical obstetrics in the Limoges medical school, has just died of septicemia, due to a scratch infected by the pus from a salpingitis on which an operation had been done. The administration of the Limoges hospital has undertaken to defray the expense of Neyraud's funeral and to pay suitable honors to his remains. The minister of public instruction has ordered academic palms to be placed on the coffin of the young victim of professional duty.

Death of Professor Trolard

The death is reported of Dr. Paulin Trolard, professor of anatomy in the Algiers college of medicine. Dr. Trolard had been since 1906 a national correspondent of the Académie de Médecine.

Treatment of Wounds of the Hands with Tincture of Iodin

During the session, May 3, of the Académie de Médecine, Dr. Paul Reclus, professor of clinical surgery at the Paris college of medicine, made a report on the treatment of wounds of the hands by painting with tincture of iodin. The treatment of such wounds has taken on much importance since the passage of the law on industrial accidents. It is well known how wide-spread is the practice of washing the hands of wounded workmen with benzin, gasoline or ether before treating them. This practice ordinarily results in the infection of the wound by the diffusion and dissemination of the microbes, which multiply in the dust deposited in the folds and wrinkles of the skin of the fingers. Dr. Paul Reclus believes that no preliminary disinfection should be done and that immediately after the accident the wounded region should be painted with tincture of iodin, a layer of which should be deposited all around and over the wound itself. When the tincture of iodin has once evaporated the region should be covered by an aseptic compress and a pad of absorbent wadding held in place by a bandage. This painting, which should be renewed every day, insures perfect asepsis of the wound, reduces inflammation to the minimum and leads to rapid cure. In order to avoid blistering, only a freshly prepared tincture of iodin should be used. On account of its extreme simplicity, dressing with tincture of iodin is capable of rendering great service in all urgent cases and especially in times of war.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 13, 1910.

Personals

Professor Curschmann of Leipsic, director of the medical clinic at that place, died May 6 at the age of 63. His death was unexpected, especially by those who, like myself, had the opportunity to see him at the meeting of the association for internal medicine in full bodily and mental vigor. Influenza of a few days' standing attacked his heart and suddenly terminated his life. In Curschmann there has departed from us a great investigator, teacher and physician. He entered on his teaching career in 1875 at the university of Berlin and in the same year was appointed at the age of 29 as chief physician at the Moabit hospital. As a result of the success which he achieved in this position he was called in 1879 to Hamburg as the director of the state hospital. Here he directed the building of the new general hospital at Eppendorff and showed a remarkable knowledge of hospital building and hospital management, so that the hospital under his direction was for a long time recognized as the model hospital of Germany. In 1888 he was called to Leipsic as the successor of the renowned clinician Wagner and in this position, in spite of numerous invitations from other universities, he remained until his death. Curschmann produced a long series of scientific articles and works. Of his monographs, his article on typhoid fever in Nothnagel's treatise is especially notable. All his articles bear the stamp of wide experience and thorough criticism; they are clearly written and therefore highly esteemed by practicing physicians. Curschmann had a vigorous personality and knew how to exert his full authority in every position. In addition he was a very politic man. He had formed the greatest school of all living German clinicians and thanks to his influence and the worth of his pupils, most teaching positions in internal medicine were occupied by his pupils, as for instance, Krehl in Heidelberg, Romberg in Tübingen, His in Berlin, Hirsch in Göttingen. Presumably he will be succeeded by one of his pupils.

Professor Edlefsen of Hamburg, died a few days before Curschmann, at the age of 68. He was for a long time professor extraordinary of medicine at Kiel and had charge of the medical policlinic at that place. He was the author of a Text-Book of Diagnosis of Internal Diseases (Lehrbuch der Diagnostik der Inneren Krankheiten). His chief work lay in the field of pulmonary diseases. Some years ago he resigned his position at Kiel and took up his residence at Hamburg.

At the end of the summer semester Professor Leber, director of the university eye clinic at Heidelberg, will retire from his professorship.

Professor Verworn of Göttingen has received a call to Bonn as successor of Pflüger. Professor Heller, director of the pathologic institute of Kiel, celebrated his seventieth birthday, May 1.

International Exposition of Hygiene at Dresden

A short time ago it was determined to establish a special department in the exposition which should point out to the public the dangers which threaten it on account of quackery. The collection of the German society for the suppression of quackery is to serve as a nucleus for this part of the exposition; a call will be issued for other material.

Berlin University Centennial

The city government has appropriated $48,000 (200,000 marks) for the celebration of the jubilee of the university in October. Out of this sum such attendants of the university are to be taken care of as have shown themselves capable, have completed their academic education and can show that their further education will be improved by travel for study.

Tuberculosis Meetings

This week, as is the annual custom, various meetings for the campaign against tuberculosis have occurred, especially a general session of the German central committee for the campaign against tuberculosis, a session of the executive section of the central committee and a session of the commission appointed by the central committee for the campaign against lupus. For lack of space I will postpone the report of these very interesting meetings until my next letter.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 10, 1910.

A Tariff of Medical Fees

The fight which the medical profession is prepared to carry on against the ruinous legislation called "social reform" requires organization and money. As about 90 per cent. of all practitioners belong already to the organization, the strike, if declared, will be rigidly adhered to and no club work will be done by doctors. In order to enable the doctors to deal with the population fairly, in case of club strike, the following tariff has been worked out for the country districts, with the strict understanding that no practitioner will be allowed to charge less:

The population will be regarded from the standopint of income. Persons or families with less than $250 (1,200 crowns) a year income, will be charged 20 cents (1 krone) per visit at the surgery; 50 per cent. more for a visit in the house of the patient, a moderate charge of 40 cents extra being added for each half hour's ride or drive. If the income be between $250 and $500 (teachers, clerks, better class of laborers) the tariff is 30 cents and 40 cents respectively for a visit, and 60 cents per half-hour drive. Persons with an income of more than $500 (2,400 crowns) or from another doctor's district will be charged 40 cents for consultation at the surgery, 50 per cent. more for a visit at the patient's lodging, and 80 cents per half-hour drive. Carriage charges are always to be paid by patient; night calls always 100 per cent. more; special hours, immediate calls 50 per cent. above ordinary fee. Consultations with the house physician are to be charged for respectively at $1.10, $1.60 and $2, and at least $2 for the consultant. The tariff will come in force on the day that the practitioners refuse all Krankenkasse or club practice; it is a litle higher than the usual fees charged in our country, in the upper limit at least, but it is very moderate in the lower limit, so as to give the poorer classes still the opportunity of obtaining medical help without the clubs. The population are informed already that this attitude of the profession has been caused by the threatening law, which will make private practice among the lower middle classes practically impossible.

The New Infants' Home in Vienna

In this country the government has taken over the charge of all orphans and foundlings and altogether over 17,000 children up to 14 years of age are at present under control in Lower Austria alone. For the purpose of dealing with foundlings in Vienna, a large up-to-date institution, the "Central Kinder-Heim" (Central Children's Home), has been erected and was recently opened by the emperor. It consists of a large building, capable of accommodating 410 children, besides 280 wet-nurses and mothers, and 54 nurses. The institution contains also a pavilion for diseased children, an isolation ward, and a reception ward for foundlings, where they are prepared, washed and brought into a condition of fitness for the home. Special care has been taken to ensure a sufficient supply of light and air to all rooms, and the chimney has been fitted with a smoke-destroying apparatus—the first instance of a large institution being provided with such an appliance in this city. The laundry handles 3,500 pounds of linen daily, and the kitchen prepares food for 600 persons. The elaborate plans, together with the grounds and building, were selected by a commission in which medical men had a deciding vote, and all children who are born in the clinics may have the first opportunity to be received there. Besides the institution negotiates positions for wet nurses, contains an information-bureau for mothers (hitherto a private affair of small associations), and all children controlled by the institute are cared for until they find employment or up to the age of 18.

Pharmacology

BROMIN-IODIN COMPOUND

The Life-History of a Nostrum

A correspondent writes for information concerning a remedy known as Bromin-Iodin Comp., which he says is manufactured by the Bromin-Iodin Chemical Company, formerly of Binghamton, N. Y., but now located in San Diego, California. In THE JOURNAL for Feb. 5, 1898, appeared an article by Dr. C. W. Ingraham, Binghamton, N. Y., entitled "Five Years' Successful Experience with a Special Mode of Treating Pulmonary Tuberculosis." This "special mode" of treatment consisted in using what Dr. Ingraham called "bromin-iodin compound," which he said had the following formula:

Iodin	gr. 1/2
Bromin	gr. 1/14
Phosphorus	gr. 1/100
Thymol	gr, 2/3
Menthol	gr. 2/3
Sterilized oil	fl. dr. 1

This "hypodermic treatment of phthisis" was widely advertised in the late nineties by the Bromin-Iodin Chemical Co., Binghamton, N. Y., and was but one of the innumerable "treatments" for pulmonary tuberculosis that have risen, had their day and, more or less gracefully, retired. It was first sold "to physicians only" for hypodermic administration. In 1906, however, physicians were told by the company that "if we find it impossible to secure your cooperation . . . we will be compelled to do business with the druggists in your locality. . . ." Apparently they found such cooperation impossible, because a leaflet was issued to the laity and the statement was made that they intended to advertise "all over North America in publications of national and international circulation, as well as in local newspapers. . . ." Naturally the laity couldn't be expected to administer this treatment by the hypodermic method and it is not surprising to read that "experiment has proved that the same solution can be taken internally." In addition to the advertising leaflet, the public also was provided with a "pocket calendar good for 200 years" which contained numerous testimonials from physicians laudatory of the "bromin-iodin" treatment. The layman who received one of the leaflets was told that if he was suffering from "asthma, bronchitis, colds, consumption, coughs, eczema, goiter, hay fever, neuralgia, rheumatism . . . also constipation and kidney troubles," and his recovery was "not as rapid as it should be," should, moreover, his physician refuse to use the bromin-iodin compound "it might not be a bad idea to discharge him" and get a physician who would!

At the time this "treatment" was first tried by its "inventor," the results given in fifty cases were: First stage, 91 per cent. cures; second stage, 50 per cent. cures; third stage, no cures, but improvement in several cases; this was in 1895. It now appears that this "treatment" has after a period of "patent medicine" exploitation come back into the "ethical proprietary" field. Presumably a mixture such as that represented by the "formula" did not lend itself to administration by mouth; there was nothing to do, therefore, but enlist the aid of "easy" physicians in furthering its sale.

THE PHARMACOPEIAL CONVENTION OF 1910

No one can predict the ultimate results of the action of the convention which has now passed into history; but for the benefit of those who did not attend the deliberations it may not be amiss to analyze those immediate results which affect the medical profession.

1. *The Election of Officers and the General Revision Committee:* This reflects fairly the composition of the convention, and this was overwhelmingly pharmaceutical. On the general revision committee of 50, there are only about 3 practitioners and about 6 pharmacologists. The other 41 members are pharmacists or chemists. Professor Remington, the chairman of the last revision committee, was reelected to the same position, and there is every reason to believe that he will endeavor to carry out the intentions of the convention fairly and efficiently.

2. *Delegates:* Delegates of certain government services and other organizations recommended by the trustees were admitted. An attempt to grant recognition to the National Association of Retail Druggists was defeated. The last action may be interpreted largely as a rebuke to the "patent-medicine" activities of the "American Druggists Syndicate."

3. *Number of Delegates from Institutions:* The recommendation of the trustees to restrict each institution to one delegate was defeated. This matter has two sides: The admission of three delegates means that the convention is representative of the individual delegates rather than of the institutions from which they are accredited; it places the medical institutions at a disadvantage; and it gives a very great advantage to the eastern institutions over those which are situated at a greater distance from Washington. On the other hand, it was argued that the eastern pharmaceutical men actually perform the greatest part of the work of revision; and that the three-delegate plan assured a larger convention. On the whole, it appears that the retention of three delegates is to be regretted.

4. *The Re-Formation of the Revision Committee:* The proposition of the trustees was carried to enlarge the general revision committee from 25 to 50; this committee to select from their own number an executive committee of fifteen. The latter are to have the charge and responsibility of the actual work of revision, while the other members will serve in an auxiliary, advisory, and supervisory capacity. It remains to be seen how this new plan will work in practice. I

it is carried out in the spirit in which it was intended—and there is every indication that this will be done—it gives promise of great usefulness. As has often been said, the old number of 25 members was too small to be representative, and too large for effective team work. The new plan secures both objects: The "General Revision Committee" is sufficiently large to really represent the convention—in fact, it makes the convention a permanent body. It can inquire into technical matters; it can advise and supervise; it can discuss questions of policy as they arise; it can help to secure publicity for such discussions; and it can aid in many other ways, and thus carry on the functions which would devolve on the convention if it were in permanent session. The convention has wisely given a very wide latitude to this general revision committee. On the other hand, the "Executive Revision Committee" can now be elected at leisure, each man for his especial fitness for his especial task. Having thus the full responsibility, as well as the full credit, for his part of the work, he will have every incentive to put forth his best individual efforts.

5. *Supplements:* The decennial revision has been justly criticised as too infrequent, at least too inelastic, for these days of rapid progress. This has been remedied by granting authority to the committee "to prepare a supplement to the Pharmacopeia at any time they may deem such action desirable."

6. *Publicity:* The universal demand for adequate publicity of the progress of revision has been met by the necessary instructions to the committee.

7. *Therapeutically Suggestive Titles, and Compound Preparations:* The Committee was instructed to eliminate these as far as possible. This is certainly a step in the right direction.

8. *Biologic Products and Biologic Assays:* The Committee was given authority to admit sera and other biologic products, as also *biologic assays of drugs.* The presence on the revision committee of an eminent serum expert, and of several pharmacologists who have had a large experience in pharmacological assaying, gives assurance that this work will be done scientifically. It was also decided to include in the Pharmacopeia *reagents which are important for clinical diagnosis.*

9. *Other Instructions in the Interest of Physicians:*

(a) Official Abbreviations: These are to be appended to all articles which are used in prescriptions. Their adoption by physicians will be optional, of course, but it will tend to prevent mistakes.

(b) A list of official preparations, in which each article is used, is to be appended.

(c) Doses: The experiment of stating the "average dose," which was made in the last revision, has been found acceptable; but the medical delegates were as a unit against the recognition of official "maximum doses," and a motion to introduce these was lost after a thorough discussion.

The "plan for revising the next Pharmacopeia," submitted by the retiring revision committee, in which the above recommendations were presented, also contained a considerable number of other valuable features of more strictly pharmaceutical interest, all tending to the improvement of the following revision, and all of which were adopted. Indeed, every item of this model report should have been adopted—but it was not to be. One clause only, and that in many ways the most significant, was voted down; namely, that relating to the

10. *Scope of the Pharmacopeia:* It was recommended that "there should not be included rarely used substances or *those whose value and use has not been established.*" Had this recommendation been adopted, and conscientiously carried out, the next Pharmacopeia would have been scientific in its contents as well as in its descriptions. It would have become a useful book medically as well as pharmaceutically. It would have become a guide to scientific prescribing. The reports of the various sections of the American Medical Association, and the replies to the circular sent out by its Committee on the Pharmacopeia, leave no doubt that this restriction was the desire of the medical profession. Teachers of therapeutics and of pharmacology foresaw that a restricted pharmacopeia would encourage a more careful study and a more extended use of the efficient and standard remedies.

The pharmaceutical profession, on the other hand, believed that its interests would be better served if admissions to the Pharmacopeia were governed by commercial expediency rather than by scientific merit. This policy is doubtless short-sighted, for the restriction of our overburdened materia medica is quite as much to the interest of the pharmacist, as of the physician and the public. However, the majority of the pharmaceutical delegates did not see it in this light. Had there been an adequate representation of physicians in the convention, they could doubtless have carried the point. In fact, the arguments for a therapeutically scientific pharmacopeia were so strong that a motion was defeated to substitute the words "value *or* use" as defining the scope. The convention did not care to go on record as discouraging scientific standards of admission! However, the majority were only too glad to avail themselves of the subterfuge of silence, by striking out the entire clause and thus leaving the determination of the scope to the general committee on revision.

This appears to leave the question open, but the committee doubtless understands what it is expected to do in the matter.

If the admissions to the future Pharmacopeia are not to be based on scientific standards; if the wishes of the profession are not to be recognized in its revision, then the book will not be regarded by intelligent physicians as a safe guide to scientific prescribing. The Pharmacopeia will always be important for enforcing standards of purity for drugs, but this practically will be the extent of its usefulness to the medical profession. The much greater field which we hope for it will have to be abandoned should this interpretation of the scope of the Pharmacopeia be accepted by the revision committee, which we trust will not be the case.

Correspondence

A Rapid Stain for Frozen Sections

To the Editor:—I was interested to note in The Journal (May 14, 1910, p. 1614) the rediscovery of an old method for staining frozen sections with thionin which I published in the *Proceedings of the New York Pathological Society* of 1901 (New series, i, 110). I can add that in an experience of ten years with this and other stains I have seen no reason to change the method as published, and can agree with Dr. Strouse as to its general applicability.

It is also interesting to record that surgeons are beginning to feel that they cannot always make a diagnosis of the exact nature of a tumor during operation, and are calling more and more on the microscopic expert to furnish accurate information. Suitable frozen sections are, in the vast majority of cases, as satisfactory for diagnostic purposes as those made after embedding and sectioning in the usual fashion; but it should be clearly understood that a man must have considerable training in this line of work before his diagnoses become reliable. Experience with thin sections stained with eosin-hematoxylin does not necessarily fit one for a diagnosis on thicker fresh sections.

I cannot, therefore, agree with Coplin, who says in Keen's "Surgery" (v, 1208), that "for diagnostic purposes the freezing method cannot be considered satisfactory," but hold with Wilson of Rochester, Minn., that the procedure is most useful and that errors do not occur if reasonable care is taken.

Francis C. Wood, New York.

To the Editor:—My attention has been called to Dr. F. C. Wood's report in the *Proceedings of the New York Pathological Society*, 1901, new series, vol. i, on the use of thionin as a stain for frozen sections. As I did not refer to this paper in my article on the same subject in The Journal (May 14, 1910, p. 1614), will you kindly allow me space to express regrets at my inability to find Dr. Wood's report before mine was published, and to state that while my work was independent, all credit for the use of the stain should belong to Dr. Wood?

S. Strouse, Chicago.

Resolutions Not Adopted

To the Editor:—I notice in the *New York Medical Record* of May 28 an item stating that certain resolutions presented by Dr. G. Frank Lydston to the House of Delegates of the Illinois State Medical Society at its last annual meeting were adopted.

I desire to call attention to the fact that this statement is not true. The facts are these: Dr. Lydston presented the resolutions to the House and moved their adoption. While this motion was pending a motion was made and carried to adjourn. The presiding officer declared the motion carried and adjourned the House. After the adjournment, and after most of the delegates had left the hall, a small number, 18 to be precise (20 being a quorum), most of whom I believe were from Chicago, held a meeting and called the second vice-president to the chair. He put the motion on the adoption of the resolutions presented by Dr. Lydston and declared them adopted. This meeting of 18 delegates out of 102 delegates present before adjournment cannot be considered a legal session of the House of Delegates of the Illinois State Medical Society.

E. W. Weis, Secretary Illinois State Medical Society.

Book Notices

Surgical Diagnosis. By Alexander Bryan Johnson, Ph.B., M.D., Professor of Clinical Surgery in the Columbia University Medical College. Vol. III. Cloth. Pp. 708, with 275 illustrations. Price, $6.00. New York: D. Appleton & Co., 1909.

Of the numerous conditions dealt with in the third and final volume of this work, particular mention may be made of the chapters on "Injuries and Diseases of the Spine and Spinal Cord" and on "Traumatic Neuroses" in which these rather obscure conditions to most general practitioners are very clearly described. The tuberculin tests for tuberculosis are considered here, having been purposely omitted from the other volumes in order that the last word might be given concerning their method of application and their value as a diagnostic measure. The dangers attending the conjunctival method are clearly set forth.

In an appendix is found some of the latest information concerning the parathyroid glands, exophthalmic goiter and hyperthyroidism, the status lymphaticus, the serum diagnosis of syphilis, recent improvements in *x*-ray apparatus and *x*-ray technic, and some additional data in regard to the diagnosis of organic lesions of the brain, thus bringing the subjects right up to the time of going to press. There is an index of authors and a very elaborate index of subjects occupying 90 pages. This is one of the best works on general surgical diagnosis that has appeared up to date.

Atlas zur Mikroskopischen Diagnostik der Gynäkologie. Nebst einer Anleitung und erlauterndem Text. Von Priv.-Doz. Dr. Rudolph Jolly, Oberarzt der königl. Universitäts-Frauenklinik zu Berlin. Paper. Price, 17.50 marks. Pp. 83, with 54 illustrations. Berlin: Urban & Schwarzenberg, 1910.

This atlas of the microscopic diagnosis of gynecology by Rudolf Jolly, includes an introduction, the application and technic of the microscopic examinations of specimens, and an explanatory text. The contents have been so systematized and simplified, and generously illustrated with pathologic sections with both high and lower power reproductions, that they are quite as invaluable to the general practitioner as to the gynecologist. The entire field of gynecologic pathology is covered, including plates of chorionic villi and decidual cells, mucous membrane and epithelium of the normal uterus, and the various stages of normal menstruation. It is illustrated with 52 exceptionally good colored plates. The explanatory notes are concise, and their meaning is clear. The author begins with the physiologic conditions, gradually develops into the simple, then the more complicated pathology, and finally brings out the differentiations. Each illustration, however, is complete in itself. The clearly defined lines drawn between the early malignant and benign growths is sufficient to make a valuable place for the work in the doctor's library.

The book is well worth possessing, even by those who do not read German, for the illustrations alone. Those who read German with difficulty will find that the book is written in a simple, easily comprehended style.

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 28, 1910:

Pierson, Robert H., capt., left Vancouver Barracks, Wash., for duty at target range near Proebstel, Wash.

Oliver, Robert T., E. S. D. S., left Fort Hamilton, N. Y., en route to Fort Totten, for temporary duty; arrived at Fort Totten same date.

Walkup, Joseph O., 1st lieut., M. R. C., left Fort Snelling, Minn., with Battery D, 5th Field Artillery, en route to maneuver tract, Sparta, Wis.

Keefer, Frank R., lieut. col., relieved from duty at Fort Wadsworth, N. Y., and ordered to West Point, N. Y., for duty as surgeon and professor of Military Hygiene, relieving Lieutenant Colonel Charles M. Gandy, Medical Corps.

Hill, Eben C., lieut., sick leave extended 1 month.

Hess, Louis T., major, relieved from duty at Fort Leavenworth, Kan., and ordered to Fort Hamilton, N. Y., for duty.

Fuller, Leigh A., major, relieved from duty at Fort Hamilton, N. Y., and ordered to Fort Leavenworth, Kan., for duty.

Lambie, John S., Jr., lieut., relieved from further duty in the Philippines Division and assigned to duty as surgeon of the U. S. A. T. *Sherman*, with station at San Francisco.

Whitney, Walter, 1st lieut., M. R. C., left Fort McPherson, Ga., en route to U. S. Rifle Range, Waco, Ga., for duty with 3rd Battery, 17th Infantry.

Woodall, William P., capt., is assigned to the command of the one-half of Co. A, Hospital Corps, which is to participate in the camps of instructions at Fort D. A. Russell Target and Maneuver Reservation, Wyo., and Fort Riley, Kan., July 18 to Sept. 15, 1910.

Gray, William W., col., on arrival at San Francisco, will proceed to St. Paul, Minn., and report in person to the commanding general, Department of Dakota, for duty as chief surgeon of that department.

Connor, Clarence H., capt., after arrival at San Francisco, and on expiration of leave of absence will proceed to Fort Brady, Mich., for duty at that post.

Van Kirk, Harry H., 1st lieut., M. R. C., relieved from duty at Fort Levett, Me., and directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco about Aug. 5, 1910.

Wall, Francis M., 1st lieut., M. R. C., relieved from duty at Fort Michie, N. Y., and directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco about Oct. 5, 1910.

Huff, John Van R., col., ordered to inspect hospital and medical departments at Forts H. G. Wright, Terry and Michie, N. Y.; Mansfield, R. I.; Trumbull, Conn.; Adams and Greble, R. I.; Rodman, Banks, Andrews, Strong, Warren and Rever, Mass.

Wallace George S., 1st lieut., M. R. C., detailed as instructor of infantry officers of the organized militia of the State of Texas, Camp Mabry, Austin, Tex., June 6 to 11, 1910.

Graham, George D., dental surgeon, returned to Fort Des Moines, Iowa, from leave of absence.

Macy, Frederick S., lieut., granted 14 days' leave of absence.

Bingham, E. G., capt., reports relief from duty as Attending Surgeon, Headquarters, Department of California, San Francisco.

Long, Charles J., dental Surgeon, reported for duty at Fort Adams, R. I.

Shugerman, Harry P., 1st lieut., M. R. C., is relieved from duty at the Army Medical School in this city; he will proceed to his home and on arrival report by telegraph to The Adjutant General of the Army for further orders.

Medical Corps, U. S. Navy

Changes for the week ended May 28, 1910:

Pleadwell, F. L., surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the summer conference at the Naval War College, Newport, R. I.

Halton, E. P., acting asst-surgeon, ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

Public Health and Marine Hospital Service

Changes for the week ended May 25, 1910.

Pettus, W. J., asst.-surgeon general, granted 1 day's leave of absence, May 24, 1910.

Banks, C. E., surgeon, granted 1 day's leave of absence, May 24, 1910.

Young, G. B., surgeon, detailed to represent the Service at the sixty-first annual meeting of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Lavinder, C. H., P. A. surgeon, granted 3 days' leave en route in Europe, under Paragraph 189, Service Regulations.

Korn, W. A., P. A. surgeon, granted 14 days' leave of absence from June 21, 1910.

Long, J. D., P. A. surgeon, directed to proceed to Philadelphia, Pa., on special temporary duty.

Lloyd, B. J., P. A. surgeon, granted 1 month's leave of absence from May 20, 1910, on account of sickness.

Mullan, E. H., P. A. surgeon, relieved from duty at Montreal, Canada, and directed to proceed to Ellis Island, N. Y., and report to the chief medical officer for duty.

Marshall, E. R., asst.-surgeon, relieved from duty at Delaware Breakwater Quarantine Station and directed to proceed to Honolulu, Hawaii, and report to the chief quarantine officer for duty.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' leave of absence, without pay, from May 15, 1910.

Duncan, Wm. A., acting asst.-surgeon, granted 30 days extension of leave from April 4, 1910, on account of sickness.

Dunn, James, acting asst.-surgeon, granted 12 days' leave of absence from June 1, 1910.

Slamberg, N. L. A. K., acting asst.-surgeon, granted 30 days' leave of absence from May 25, 1910.

Tarbell, B. C., acting asst.-surgeon, granted 1 day's leave of absence, June 19, 1910.

Thornton, M. J., acting asst.-surgeon, granted 1 day's extension of leave, May 8, 1910, on account of sickness.

Wakefield, H. C., acting asst.-surgeon, granted 13 days' leave of absence from June 13, 1910.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

WARMED ANESTHETIC VAPORS

To the Editor:—Please give authorities in regard to the use of warmed anesthetic vapors or gases. ANESTHETIST.

ANSWER.—

Haun: "Advantages of Warming Chloroform for Anesthesia," München. med. Wchnschr., Nov. 26, 1907, No. 48.

Gwathmey, J. T.: "Warm versus Cold Anesthetics," New York State Jour. Med., February, 1908; abstr. in THE JOURNAL, April 4, 1908, p. 1150.

Report of the Anesthetic Commission of the American Medical Association, THE JOURNAL, Nov. 7, 1908, p. 1572 et seq.

McRoberts, W. J.: "An Advance in Anesthetic Technic," Northwestern Lancet, Aug. 15, 1909; abstr. in THE JOURNAL, Sept. 18, 1909, p. 970. This paper describes the method and the apparatus used for administering the warmed anesthetic.

DENTAL ANALGESIC

To the Editor:—As all country doctors have more or less extraction of teeth to do, it would be of interest to more than the writer if you would kindly publish formula for a safe and efficient analgesic. Please state amount to be injected. A. E. L.

ANSWER.—The following solution for injection for the production of local anesthesia is recommended by an authority on dental materia medica and therapeutics:

℞	gm. or c.c.		
Cocainæ hydrochloridi	|3		gr.v
Sodii chloridi	|25	or	gr.iv
Aquæ destillatæ	30|		fl℥ i

M. Sig: Cocain injection for dental purposes; to each c.c. add 1 drop of epinephrin solution (1-1000) when used.

For pain after extraction, cotton saturated with chloroform or ether may be applied to the cavity.

Marriages

HARVEY GORDON MCNEIL, M.D., to Miss Mary Jenks, both of Los Angeles, May 12.

THOMAS HENRY LEGG, M.D., to Miss Evelyn C. Repp, both of Union Bridge, Md., May 18.

EMILE E. DELANNEY, M.D., to Miss Margaret Mendenhall, both of South Omaha, May 14.

ARTHUR J. BOOKER, M.D., DesMoines, to Miss Daisy Deane Walker, of Indianapolis, May 12.

CHARLES REUBEN MCCREERY, M.D., Tacoma, to Miss Bertha F. Harris, of Seattle, May 14.

ALBERT E. BERNSTEIN, M.D., Detroit, to Miss Fannie Schomberger, of Traverse City, Mich., May 14.

EDGAR S. EVERHART, M.D., Crabtree, Pa., to Miss Madaline Lee Christian, of Richmond, Va., May 24.

CHARLES C. HEADLEY, M.D., Holloway, Ohio, to Miss Margarhetta Clemens, of Moorefield, O., May 11.

DANIEL JOHN KEELAN, M.D., Montgomery, Vt., to Miss Angeline Poronto, of Enosburg, Vt., May 10.

JOHN EGERTON CANNADAY, M.D., Charleston, W. Va., to Miss Margaret Stuart Roller, of Harrisonburg, Va., May 11.

ED HENRY SPIEGELBURG, M.D. Hot Springs, S. D., to Miss Maud Lee Talbott, of Boise, Idaho, at Hot Springs, May 9.

Deaths

Henry Sayles Kilbourne, M.D. University of Michigan, Ann Arbor, 1865; a member of the American Medical Association; who served as contract surgeon in the United States Army during the Civil War and at intervals thereafter until 1875, when he was appointed assistant surgeon in the regular establishment; was made captain in 1880; promoted to major in 1894; served during the Spanish-American War with troops at Tampa, Fla., and as chief surgeon of the Second Division, Fifth Army Corps in Cuba during the Spanish-American War; was promoted to Deputy Surgeon General with the rank of Lieutenant Colonel in 1903, and was retired from active service, Aug. 14, 1904; died at his home in Washington, D. C., May 16, aged 69.

Daniel Mayer, M.D. Eclectic Medical Institute, Cincinnati, 1869; of Charleston, W. Va.; a member of the American Medical Association, and formerly president of the West Virginia State Medical Association; a surgeon of volunteers during the Civil War, and at one time state commander of the G. A. R. of West Virginia; who was appointed by President McKinley consul-general to the Argentine Republic; died in the Jewish Hospital, Cincinnati, May 20, from nephritis, aged 73.

Oliver Payson Rex, M.D. Jefferson Medical College, 1867; hospital steward of the Thirty-third Illinois Volunteer Infantry; and later Major and Surgeon during the Civil War; for several years a lecturer on children's diseases in Jefferson Medical College; a resident of Abington, Pa., and medical director for several years of the Penn Mutual Life Insurance Co.; died May 16, on a steamer in which he was returning home from the Mediterranean, from pneumonia complicating typhoid fever, aged 63.

F. Gurney Stubbs, M.D. Northwestern University Medical School, 1893; a member of the American Medical Association, Chicago Laryngological and Rhinological Society, and Physicians' Club of Chicago; assistant professor of laryngology and otology in Rush Medical College; professor of laryngology, rhinology and otology in the Chicago Eye, Ear, Nose and Throat College; died in St. Luke's Hospital, May 26, from pneumonia, aged 41.

Frank Monroe Tiffany, M.D. University of Pennsylvania, Philadelphia, 1896; a member of the American Medical Association and a fellow of the American Academy of Medicine; a member of the staff of the Stamford (Conn.) Hospital and Children's Home; consulting physician to the Stamford Day Nursery, and physician in charge of St. John's Church and Home; died at his home in Stamford, May 18, from cancer, aged 41.

Clarence Samuel Bartlett, M.D. Dartmouth Medical School, Hanover, N. H., 1902; a member of the American Medical Association and New Hampshire and Massachusetts medical societies; from 1894 to 1906 a member of the staff of the New Hampshire State Hospital, Concord; a member of the Medical staff of the Henry Haywood Memorial Hospital, Gardner, Mass.; died recently at his home in that city, aged 41.

William R. Howard, M.D. College of Physicians and Surgeons, Baltimore, 1879; a member of the Medical Society of the State of New York, and one of the charter members of the Rochester Pathological Society; a member of the staff of St. Mary's Hospital and surgeon to the Buffalo, Rochester and Pittsburg Railway; died at his home in Rochester, May 22, aged 54.

Monroe Griffith Reynolds, M.D. Rush Medical College, 1880; of Aledo, Ill.; a member of the Illinois State Medical Society; and formerly president of the Mercer County Medical Association; representative in the Illinois General Assembly in 1904-1906, and Mayor of Aledo from 1899-1901; died suddenly on his farm near Redwood Falls, Minn., May 13, aged 64.

Rob Roy Kennedy, University of Nebraska, Omaha, 1902; formerly registrar of the State Board of Health, District 41, Nebraska; city physician of Murray, Utah; died in St. Mark's Hospital, Salt Lake City, March 28, from cerebral embolism after an operation for nephrectomy and appendicectomy, aged 35.

Thomas H. Daugherty, M.D. Cincinnati College of Medicine and Surgery, 1866; a member of the Kentucky State Medical Association; for many years a practitioner of Sadieville, Ky., and president of the Sadieville Deposit Bank; died at his home in Georgetown, May 19, from heart disease, aged 63.

Edward R. Perkins, M.D. Hahnemann Medical College, Philadelphia, 1878; a veteran of the Civil War and for more than 30 years a practitioner of Excelsior, Minn.; died suddenly May 21, on a Lake Minnetonka car, while making a professional call, from cerebral hemorrhage, aged 67.

Michael Brinkmann, M.D. University of Marburg, Germany, 1848; surgeon in the German Army in 1848 and 1849, and assistant court physician in 1850; said to have been the first to introduce hydrotherapy in the United States; died at his home in Philadelphia, May 19, aged 84.

Wilton Winston Winget, M.D. Miami Medical College, Cincinnati, 1893; a member of the Oklahoma State Medical Association; died at his home in Nowata, May 14, from the effects, it is said, of a hypodermic injection of medicine administered to cure the morphin habit, aged 41.

Henry Proper Stillwell, M.D. University of Buffalo, N. Y., 1879; a member of the Medical Society of the State of New

York, and vice-president of Schuyler County Medical Society; died at his home in Burdett, April 9, from cerebral hemorrhage, aged 64.

Jacob S. Giltner, M.D. Pennsylvania Medical College, Gettysburg, 1846; medical director of the Army of the Cumberland during the Civil War, and a practitioner of Portland, Ore., since 1866; died at his home, May 18, from cerebral hemorrhage, aged 85.

James Bourne Ayer, M.D. Harvard Medical School, 1873; a member of the American Medical Association; formerly an overseer of the poor at Boston and a member of the State Board of Insanity; died at his home in Boston, May 14, aged 60.

William G. Gardiner, M.D. Toledo, Ohio, Medical College, 1883; formerly demonstrator of physiology and anatomy in his alma mater; a member of the American Medical Association; died at his home in Toledo, May 18, from pneumonia, aged 69.

Thomas Drury Edwards, M.D. University of Tennessee, Nashville, 1884; a member of the American Medical Association, and a specialist in disease of the eye; died at his home in Union City, Tenn., May 16, aged 53.

Martin A. McHenry, M.D. Tulane University, New Orleans, 1882; a member of the Louisiana State Medical Society, and a wealthy and prominent practitioner of Monroe; died at his home in that city, May 15, aged 55.

Edward C. Adams, M.D. Northwestern Medical College, St. Joseph, Mo., 1886; a specialist on diseases of the eye and ear of St. Joseph, Mo.; died in a hospital in that city, May 14, from cerebral hemorrhage, aged 52.

Sidney Bishop, M.D. Bellevue Hospital Medical College, 1873; an honorary member of the Bridgeport (Conn.) Medical Association; died at his home, March 24, in that city, from valvular heart disease, aged 62.

John W. Hebb, M.D. University of Maryland, Baltimore, 1860; a member of the Medical and Chirurgical Faculty of Maryland; died at his home in West Friendship, May 18, from senile debility, aged 71.

Joseph Solomon Morton, M.D. Rush Medical College, Chicago, 1887; a member of the American Medical Association; died while fishing near his home in Vernon, Ill., May 18, from angina pectoris, aged 46.

Francis X. Weil, M.D. University of Pennsylvania, 1869; a member of the Medical Society of the State of Pennsylvania; treasurer of York County Medical Society; died at his home in York, May 20, aged 69.

Joseph C. Kimsey (license, years of practice, Ind.); a practitioner of Steuben County for 54 years; a veteran of the Civil War; died at the home of his daughter in Angola, May 16, aged 90.

John G. Stricklett (license, years of practice, Ill., 1880); a practitioner for 52 years, and a veteran of the Civil War; died at his home in Springfield, May 8, from senile debility, aged 83.

William Dunstone (license, Mich., years of practice, 1900); for 44 years a practitioner of the Copper Country; died at his home in Dollar Bay, Mich., May 18, from senile debility, aged 79.

Newell Allen Dryer, M.D. University of Buffalo, N. Y., 1864; for 40 years a practitioner of Bath, Mich.; died suddenly in Perkins, Okla., April 23, from cerebral hemorrhage, aged 71.

Allen V. Sheridan, M.D. Kansas City, Mo., Medical College, 1899; of Broken Bow, Neb.; formerly of Paola, Kans.; died suddenly in that city, May 16, from heart disease, aged 41.

Frederick S. Gray, M.D. University of Vermont, Burlington, 1882; a member of the American Medical Association; died at his home in Troy, Vt., March 1, from diabetes, aged 53.

Simeon Joseph Gérouard, M.D. Laval University, Montreal, 1890; of Worcester, Mass., died in the Worcester City Hospital, April 3, from lobar pneumonia, aged 40.

Ezra L. Broughton (years of practice, Mich., 1900); of Lansing; died in the Michigan Asylum for the Insane, Kalamazoo, May 5, from arteriosclerosis, aged 74.

A. W. Manchester (license, Iowa, years of practice, 1886); for 35 years a practitioner of Walker; died at his home, May 14, from heart disease, aged 62.

Jacob P. McIntosh, M.D. Eclectic Medical Institute, Cincinnati, 1869; died at his home in Worthington, Ind., April 30, from senile debility, aged 74.

Arthur Wadsworth, M.D. Kentucky School of Medicine, Louisville, 1893; died at his home in Castleton, Ind., May 14, from heart disease, aged 52.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ST. LOUIS, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

AMERICAN PEDIATRIC SOCIETY

Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Continued from page 1712)

The President, DR. D. L. EDSALL, in the Chair

SYMPOSIUM ON POLIOMYELITIS

Infantile Poliomyelitis; Its Relation to the Community in Reference to Etiology and Prevention

DR. R. W. LOVETT, Boston: The medical profession of to-day is confronted with the task of making a new literature on the subject of infantile poliomyelitis, and of dealing with the various aspects of the disease as it affects the community. Orthopedic men who have to repair the damage done will be anxious to join hands with the pediatrists in fighting this malady. It is one of the most infectious diseases and is unquestionably on the increase. It is serious enough to warrant greater attempts on the part of health authorities to investigate the conditions under which it occurs. Information obtained in Massachusetts in the past year shows that the death rate is generally from 5 to 15 per cent. Of the patients who survive over four-fifths are permanently paralyzed and many crippled for life. The recognition of outbreaks of infantile poliomyelitis is of recent date. From the time of the report of the first outbreak until 1909 is only thirty years. Sixty-nine outbreaks have been reported all together. The outbreaks of the past five years show that it is not a local condition. The United States shows over one-half of the reported cases. There has been an increase in outbreaks in the last five years in a way not to be explained by increased interest in the disease. There are more in cold than in warm countries. More cases are reported in the United States than in other parts of the world.

It is evident that house-to-house investigations of all outbreaks should be made by competent men. The infectious nature of the disease has been demonstrated in the laboratory by Flexner and others, but I believe the work in the field to be of equal importance. Maps prepared by the State Board of Health of Massachusetts show the distribution of the disease there. One hundred and thirty-six cities and towns were listed according to the prevalence of the disease. Boston is shown by districts.

It is notable that density of population seems to have nothing to do with distribution. Most cases occur in old houses. Prevalence of the disease is shown not to be coincident with deficiency of rainfall. Out of 187 cases, 149 children were paralyzed. There were 48 abortive cases. More males than females were affected. Nearly one-half of the children had been wading or swimming in contaminated water before the onset of the disease. Only 7 per cent. occurred in first year of life, but 87 per cent. in the first ten years. Pain and tenderness occurred in a large percentage of cases. Duration of the paralysis was from three days to three months. No conclusions were drawn from the investigation, the report being entirely a preliminary one, but I think if the investigation of the disease by health authorities is to be continued it should be so indicated by the representatives of the societies present.

The Clinical Aspects of Poliomyelitis; Types; Communicability; Mortality

Dr. L. Emmett Holt, New York: There seems to be an alarming increase of epidemics of this disease. The infection, starting in Europe, is spreading over this country and probably over the entire world. There is no essential difference between the two forms of the disease, except as to communicability. The analogy to cerebrospinal meningitis is striking. Virulence is greater when the disease is epidemic, but otherwise they seem identical. The disease varies in severity in different epidemics. The death rate in sporadic cases is much lower than in the epidemic cases. The proportion of abortive cases cannot be estimated at present, but it is probable that the number is quite large. Several cases of transmission by a third party have been noted. The disease is contagious, and under certain conditions highly so, demanding in epidemic forms a strict quarantine. Healthy persons may be carriers of the infection. Contact with persons suffering from the disease, or associated with it, is the medium of infection. The disease seems to vary as to its communicability at different times. I believe that a new name should be sought for the disease, as the term used is not exact, inasmuch as it is not limited to the anterior horns, nor indeed to the cord itself. I suggest the name, epidemic myeloencephalitis.

Experimental Epidemic Poliomyelitis and Its Relation to Poliomyelitis in Human Beings

Dr. Simon Flexner, New York: In the last few months it has been demonstrated with certainty that a disease agreeing in clinical type and pathologic features with anterior poliomyelitis can be produced regularly in certain of the lower animals.

[The results of Dr. Flexner's experiments will be found in papers published in The Journal during 1909 and the present year.]

Paralysis of the Neck and Diaphragm in Poliomyelitis

Dr. Irving M. Snow, Buffalo: I wish to report such a case terminating in complete recovery in a boy of 4 years. There was pain, tenderness and retention of urine. In a day or two flaccid palsy of the neck occurred. There was complete paralysis of the neck muscles so that patient had no control of the head whatever. Most of the distress, however, was from difficulty in breathing. For ten days he remained in a stationary condition. On the fourteenth day of illness the patient improved, but the neck muscles remained paralyzed. A jury mast had to be employed for some time. I believe that cervical poliomyelitis, affecting only the spinal accessory nerve, is rare, and although paralysis of diaphragm is rare and dangerous, recovery is possible.

The Pathology of Poliomyelitis

Dr. Israel Strauss, New York, described in detail the lesions found in the disease, demonstrating them by means of many lantern-slides.

This is no longer a disease of doubtful origin, but is unquestionably due to infection. The virus reaches the meninges very early after infection. Infection may take place through the intestinal route. In regard to the experiments in which infection was produced by scarifying the nasal mucous membrane, that would seem to be really introducing the infection directly into the blood. I believe there is a strong resemblance between the virus and that of rabies. I wish to call attention to the interesting relations between the pathologic changes shown and the clinical picture of the disease. Many of the cells in the cord are not affected and can undergo rapid recovery. The extent of the paralysis gives no idea of the extent of the lesion, and I believe that in every case in which the cord is infected the bulb is also affected. The hope of the future is in finding a means for checking the disease before it has attacked the ganglion cells, and of finding the source of infection and preventing its spread.

Treatment for the Amelioration of Permanent or Partial Paralysis by Silk Tendons and Silk Ligaments

Prof. D. Fritz Lange, Vienna: In the acute stage, fixation, either in an orthopedic bed or plaster-of-Paris bandages, is a measure to be recommended. After the subsidence of the acute stage a second task develops for the orthopedist—to prevent the occurrence of contractions and interference with the nutrition of the affected muscles. I would warn you especially against rough, hard massage. The muscles may be weakened and injured instead of strengthened in this way.

[His method of employing silk tendons and silk ligaments was demonstrated on a model. He uses a celluloid support to prevent sinking of the arch of the foot and during the night uses a steel support. Where the muscle is too short he lengthens it by means of silk sutures.]

Discussion on Poliomyelitis

Dr. B. Sachs, New York: I rather think the name infantile spinal paralysis is the proper one clinically. Perhaps a more proper name from a pathologic standpoint would be polioencephalomyelitis. I consider that time given to massage and electricity in these cases is time wasted; I cannot see that such methods do any definite good, and a great deal more benefit would be attained by early institution of orthopedic measures. The atypical forms of the disease I believe are rare.

A Comparison in Boys and Girls of Weight, Height, Epiphyseal Development

Dr. Thomas Morgan Rotch, Boston: The series of charts exhibited here demonstrate that at first boys are heavier and taller than girls, but the girls' weight line crosses the boys' at about 13; the boys' again crosses the girls' at about 17. The line for height shows about the same thing. Age does not readily determine weight and height. Girls are lighter and shorter than boys at birth, but before puberty the girls gain. The charts show the lack of relationship between epiphyseal development and general growth. In grading individuals the epiphyseal development should replace chronologic grading. The child's welfare depends on maintaining a proper equilibrium, and there should be a curriculum adopted to certain stages of epiphyseal development.

The Cytodiagnosis of Tuberculous Meningitis and the Possibility of Recovery

Dr. Charles Hunter Dunn, Boston: The child whose illness forms the basis of my paper was a girl of 3 years of age. Father, mother and younger sister are well; brother died of tuberculosis of spine. There is nothing remarkable in previous history. December 5, two days before I saw her, she began to vomit; continued vomiting all day; at 5 p. m. vomiting ceased; next morning she was better and played a little; in afternoon vomited once. Temperature varied from 99 to 100. Increasing apathy was the most noticeable feature. She was a well-developed, well-nourished child, lying on her back, with eyes open, but took little interest in her surroundings; eyes fixed and staring; ptosis of left eyelid; no retraction of head; knee jerks somewhat more lively than normal; moderate Kernig. She was given castor oil and irrigation of colon until the following day. Then she began to cry out. There was marked rigidity of right arm and hand. She was seen again the following day; had had bad night; crying out and twitching of hands; temperature not above 100; apathy more marked; occasional slight internal strabismus; Babinski's sign present. Lumbar puncture; 10 c.c. cloudy fluid obtained; examination showed no fibrin formation; slide count showed 260 lymphocytes per cm., 2 per cent. polynuclears, 96 per cent. lymphocytes, 2 per cent. endothelial cells. With stain for tubercle bacilli several clumps of acid-fast bacilli were found which resembled tubercle bacilli. Positive diagnosis was made and unfavorable prognosis given. The condition cleared up and patient is now perfectly well. The evidence of the presence of the tubercle bacilli, with the other signs, is strong evidence of its being a case of tuberculous meningitis, and I believe we are justified in holding out some hope in these cases. If it were possible to demonstrate the bacilli in every case of lumbar puncture it would be of great value. The predominance of lymphocytes may be generally accepted as diagnostic. I have endeavored to establish a standard of the number of cells present in the fluid, and have found in sixty cases that the average is between 200 and 400 per cm. Should this be confirmed, it will give additional means of making positive the diagnosis of tubercular meningitis. It might lead to recognition of other cases of recovery in the future.

DISCUSSION

Dr. W. P. Northrup, New York: I have had one of these "don't-know" cases myself, but do not think one is justified in feeling sure of this diagnostic method. In my case the patient had all the symptoms of tuberculous meningitis, with increased fluid and increased lymphocytes on lumbar puncture, but the patient suddenly began to get better. Why, I do not know, so I refer to them as "don't know" cases.

Dr. F. S. Meara, New York: I have lately correlated the cases of meningitis in Bellevue for the past three years, and of fifty in which lumbar puncture was done in forty the bacillus was recovered. My results correspond closely with those of Dr. Dunn. One child under 1 year, in whom the bacillus was found in the fluid, improved after some weeks, and it was thought to be a case of recovery, but the child suddenly became worse and died. There were a number of cases of so-called meningismus in which there was slight increase in the cells.

Dr. S. M. Hamill, Philadelphia: I have not formally reported, but in a discussion referred to a case of tuberculous meningitis which I had under my care a few years ago in which the bacilli were recovered in the fluid and in which recovery occurred. There was slight increase of leucocytes and the tubercle bacilli were found. I had not laid particular stress on the case because no animal injections were made and so the final link in the chain of evidence was lacking.

Dr. J. P. Crozer Griffith, Philadelphia: Frebinger has reported finding the bacillis in a case in which the patient recovered.

Dr. F. S. Churchill, Chicago: The presence of lymphocytes is not sufficient; only the presence of the bacillus is positive proof.

Dr. Isaac A. Abt, Chicago: I believe that patients sometimes recover from tuberculous meningitis. In a case seen in Vienna the diagnosis was made and later, the child having died of another disease, the scars at the base of the brain were shown at autopsy, confirming the clinical diagnosis.

The General Considerations Regarding the Effects of Vaccines

Dr. S. M. Hamill, Philadelphia: Vaccine treatment differs in no way in children from that in adults, except in the matter of dosage. Relatively small minimum doses are generally advocated, but there is considerable difference of opinion as to maximum doses. The impressions one gathers are that it has been demonstrated that localized infections with staphylococcus pyogenes aureus are quickly cured; that generalized infections are favorably influenced; that gonococcal infections are favorably influenced; that in other diseases there is not enough data yet to warrant any striking conclusions.

(To be continued)

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fifth Annual Meeting, held at Washington, D. C., May 3-5, 1910

(Continued from page 1807)

Clinical Significance of Transitory Delirium Cordis

Dr. George Henry Fox: By transitory delirium cordis is meant a transitory but extreme irregularity of the heart, during which the auricular waves disappear from the venous tracings. The paroxysms may be excited by exhaustion, vomiting, exertion or excitement, or they may come on with no apparent cause. In two patients, over 40, the first paroxysms occurred after operations. The heart may be absolutely negative on physical examination between attacks and the diagnosis of a nervous condition made. However, as five of the six patients ultimately developed the permanent form of irregularity with cardiac insufficiency the prognosis should be guarded.

DISCUSSION

Dr. Joseph H. Pratt, Boston: I have under observation now a case of the type described. The patient is 60; has never had any shortness of breath; he is well between attacks, except that he is nervous; no shortness of breath on exercise. A month or two ago I attended him in one of his attacks. His pulse was very irregular, and varied from 120 to 140 beats per minute. The attack lasted twelve hours. The tracings showed the heart sounds apparently duplicated. This condition might readily be mistaken for a cardiac neurosis.

Dr. Walter B. James, New York: From a study of 150 cases and cardiograms I am convinced that arrhythmia forms an important group of cases which has not been subdivided satisfactorily. There is no question whatever that a great number of these cases depend on auricular fibrillation. I believe that the use of the electrocardiogram is the only means of determining whether this is the case or not.

Relation of Combined Intoxication and Bacterial Infection to Necrosis of the Liver, Acute Yellow Atrophy and Cirrhosis

Dr. Eugene L. Opie, New York: By the administration of poisons which attack the liver, namely, chloroform or phosphorus, in combination with bacterial infection, it is possible to reproduce the peculiar midzonal necrosis which in man occurs in association with bacterial infection, under conditions which are not fully understood. The same combination of poison and bacteria, apparently acting with maximum intensity, reproduces a lesion resembling acute yellow atrophy in man; necrosis and hemorrhage are followed by regenerative changes. When the poison in association with bacterial infection repeatedly produces relatively slight changes, cirrhosis of the liver occurs and advances much more rapidly than that produced by the poison alone.

DISCUSSION

Dr. S. J. Meltzer, New York: The results obtained by Dr. Opie are very practical and important, but I should like to offer a suggestion. His results were obtained by using chemicals on the one side and bacteria on the other. Some years ago I presented a paper before this association in which I pointed out certain facts now generally recognized, namely, that bacteria like the typhoid bacillus or streptococci when introduced into the circulation disappear in a very short time. But if there is a small injury inflicted, then these bacteria will start to develop. In Dr. Opie's experiments it might be the chloroform or the phosphorus that caused this injury.

Dr. William W. Welch, Baltimore: Experimental work on cirrhosis of the liver has hitherto been very unsatisfactory, particularly with alcohol. I have never succeeded in producing cirrhosis of the liver experimentally with alcohol. The liver has an enormous regenerative power, and in order to produce cirrhosis we must inhibit this regenerative power. A combination of the action of toxins with something which prevents this regenerative power may give the real explanation of the cause of cirrhosis of the liver.

Development of the Epiphyses of the Hand and Wrist

Drs. T. M. Rotch and H. W. Smith, Boston: During the past year work in this direction on boys and youths from 7 to 20 years of age has been carried on with the following results: It has been found that the development of the hand and wrist represents so well that of the other epiphyses of the skeleton that they furnish the best material for the study of epiphyseal development. It has been found that the epiphyses which appear first are the last to unite, so that the lower epiphysis of the radius has proved to be of especial value in this work since it appears so early and unites so late. It has been found that while the appearance of the carpal bones and epiphyses furnish us with an index for the first half of epiphyseal development, the uniting of the epiphyses of the radius, ulna, metacarpal bones and phalanges provide us with a means of establishing an index for the second half of epiphyseal development.

SYMPOSIUM ON INTRACELLULAR FERMENTS

Interpretation of the Metabolic Defects in Diabetes Mellitus

Dr. A. E. Taylor, Berkeley, Cal.: There are four chief reactions of glucose in the animal body; the formation of glucose from levulose and galactose, and the formation of galactose from glucose; the formation of glycogen from glucose, and the reversed reaction; the formation of fat from glucose; and the combustion of glucose. All are reactions of fermentation. On the basis of the nature of the chemical reactions involved, all are presumably related to different enzymes. Retained fully in true diabetes is the reaction of intramolecular conversion, the formation of glucose from levulose and galactose. More or less completely lost are the power of forming glycogen from glucose, of forming fat from glucose, and of burning glucose, especially the last. In the reaction of formation of glycogen from glucose are two stages known: the stage of disaccharide and of polysaccharide; we do not know where in diabetes the difficulty lies. The loss of the power of forming fat from glucose cannot be studied until we know whether normally sugar is formed from fat in the body. In the case of the loss of the power of burning sugar, it is known that the difficulty lies in the very first stages of the reaction, before the stage of lactic acid. The loss of power of forming glycogen and fat from glucose cannot be dependent on the loss of the power of burning glucose.

The loss of power of burning glucose is physico-chemically to be interpreted as follows: Glucose in alkaline reaction is slowly burned; this is the auto-reaction. The muscles provide a zymase, which is of low activity only. The pancreas, presumably the islands of Langerhans, provide a zymo-excitor, whose action is to multiply greatly the acceleration accomplished by the muscular zymase. A direct analogy is to be found in alcoholic fermentation, where the zymase of the yeast is the enzyme and phosphoric acid the zymo-excitor. Loss of combustion of glucose could be caused by loss in the mass of the muscular enzyme, by loss in the mass of the pancreatic zymo-excitor, or by some disturbance in the reaction. The best investigations indicate that in diabetes of the classical type, the cause is to be found in the pancreas, leading to a more or less complete reduction in the mass of the zymo-excitor.

The Internal Secretion of the Pancreas

Drs. J. H. Pratt and L. H. Spooner, Boston: Atrophy of the pancreas was produced by ligating the ducts in dogs and cats. Limit of assimilation of carbohydrates decreased 50 per cent. or more in two months after occluding the pancreatic ducts. In a dog kept under observation for one year, diabetes did not develop. There was no definite evidence of compensation on the part of other organs for diminished pancreatic function. Limit of assimilation for glucose was markedly increased by feeding fresh pancreases. In both dogs and cats there was complete disappearance of the islands of Langerhans in atrophied pancreases without the occurrence of diabetes.

Clinical Experiences with the Cammidge Reaction

Drs. D. C. Balfour, J. T. Pilcher, B. C. Willis and B. F. McGrath, Rochester, Minn.: Of 62 patients at operation showing involvement of pancreas, 50 gave more or less “positive reactions. Of 50 cases showing at operation no pancreatic involvement, seven gave more or less “positive” reactions. Of 25 “well” individuals one gave a “positive” reaction. This work served to show the possibilities of error owing to the indefiniteness of what actually constituted a reaction due to great variation in color changes, amount of precipitate, type of crystals and relation of controls. Additional cases studied later were clinically of four classes: I. Cases shown at operation or autopsy to have involvement of pancreas. II. Cases (with abdominal or pelvic lesions) which at operation or autopsy were shown to have no involvement of the pancreas. III. Sick individuals in whom the pancreas were not examined. IV. Apparently well individuals.

Of Group I (pancreas involved), containing 21 cases, 14 were examined before operation. Of these, 6 gave positive reactions. Of the same 21 cases examined five days after the operation 6 were positive, 3 of these having been positive before operation, 1 negative and 2 not previously examined. Eighteen of these cases were examined about the ninth day after operation, and 3 gave positive reactions. These 3 had all been positive at the examination before operation. One had been positive on the second test, and the other two negative.

Of Group II (pancreas not involved), containing 60 cases, 21 were examined before operation. Of these, 14 were positive. Five days after operation all 60 were again examined and 15 were positive. Four of these had been positive before operation and the remaining 11 had not been previously examined. About nine days after operation 55 of these cases were again examined. Fourteen were positive. Of these, 5 had been positive before operation and the remaining 9 not examined before operation. Nine of the 14 cases had been positive five days after operation.

Of Group III (sick persons whose pancreases were not examined) 207 cases were examined. Seventy-three of these were positive. Of these 73 positives 15 were goiter cases (31 goiter cases in all examined), 8 were appendicitis cases, and the remainder were cases of salpingitis, uterine tumors, etc.

Of Group IV (apparently well persons) 17 cases were examined from one to five times each. Of these, 5 were positive.

From the foregoing it is apparent that even where the most elaborate care is exercised to follow the technic of Cammidge's “C” reaction, in the most uniform manner, if knowledge of the clinical histories and other factors of the personal equation be eliminated, the end results, judged by Cammidge's own criteria, must be considered, as a means of diagnosing disease of the pancreas, as both valueless and misleading. There is no apparent clinical relationship between disease of the pancreas and any of the various types of end reaction. It does not seem that the end reactions are artefacts but rather that they indicate actual metabolic variations. The relationship of these changes in metabolism to the welfare of the patient is not apparent.

Discussion on Ferments

Dr. Francis P. Kinnicutt, New York: Our observations at the Presbyterian Hospital do not permit me to accept these conclusions. Our work is done most carefully, and the personal equation is eliminated. The examinations are made by one person who is an expert chemist in the laboratory and who has no knowledge of the cases. The specimens of urine are simply sent to him in the laboratory, and the improved Cammidge test is used in all cases. We have tried it very carefully in 127 cases. Among these there were positive reactions in 24, while in the remainder the reactions were negative.

Dr. L. A. Wilson: It seems to me that the results are far from proving that a positive test will demonstrate pancreatic lesions. Strange as it may seem, the test was positive in many healthy individuals. In patients with pancreatic lesions the reaction varied greatly. One day they would have a beautiful reaction; during the next twenty-four hours the specimen sent would show no reaction.

Bacteriology of Acute Respiratory Infections

Dr. L. Emmett Holt, New York: Nearly 1,000 cultures have been made from children, mainly hospital patients, these chiefly from the bronchial secretion. Cultures for the sake of comparison have been made from the nose, nasopharynx and pharynx. The organisms studied have been the pneumococcus, influenza bacillus, streptococcus, staphylococcus, tubercle bacillus and diphtheria bacillus. The persons are classified as: (1) healthy hospital inmates; (2) those suffering from acute illness, non-respiratory; (3) those suffering from mild acute respiratory infections; (4) pneumonia. An attempt has been made to connect the clinical symptoms with the bacteriologic findings. In most cases mixed infections were present. In many the pneumococcus, influenza bacillus or staphylococcus predominated and gave a definite clinical picture, temperature curve, etc. Infection with the *Bacillus* *influenza* was usually of a mild type, but with fairly characteristic symptoms and temperature; staphylococcus infections were *usually mild*, sometimes persistent streptococcus infections are uncommon as a predominant type.

A Clinical Method of Estimating the Coagulability of the Blood

Dr. R. D. Rudolf, Toronto: In this research the glass tubes introduced by Sabrazes and McGowan were used. These are tubes with a caliber of 1.5 mm. and a length of about 7 inches. They are partially filled with blood taken under certain precautions and after a few minutes are broken across at half inch intervals every half or quarter minute and the broken ends are slowly separated. When coagulation has occurred the blood column does not break with the glass as it does until then, but a thread of fibrin remains connecting the two parts of the broken tube.

About five hundred estimations have been made and the results are, under the same circumstances, very constant. No definite variations occur at different times of the day nor in relation to meals. The temperature at which the filled tubes are kept, however, makes a marked difference in the time of coagulation, this varying roughly about one minute for every degree Centigrade.

SYMPOSIUM ON VACCINE THERAPY

The Basic Principles of Vaccine Therapy

This paper by Dr. J. G. Adami, Montreal, will appear in full in The Journal.

Vaccine Therapy in Typhoid

Dr. M. W. Richardson, Boston: Typhoid vaccines are of the greatest value in prophylaxis, and should be made use of by all who are likely to be exposed to the disease. Their use by the general public cannot be expected in the near future. For this result, time and education will be required. Typhoid vaccines properly used will, I feel sure, prevent a large proportion of relapses. The success of vaccines in the treatment of the original disease will depend on the character of the case. Conservatively used they will do no harm and they may be of much assistance. Early diagnosis and early treatment will be, undoubtedly, of great importance.

Effects of Injections of Killed Streptococci in the Living Body

Dr. G. H. Weaver, Chicago: The galactose-killed germs are *more active than heat-killed streptococci. In erysipelas* they have no effect except in the subacute and *chronic* cases. In streptococcic complications of the eruptive diseases they have no effect in the acute stage, but in the subacute and chronic stages marked benefit is noted in some cases. The "septic" cases are often benefited. The difficulties in judging the results of injections are very great because of the natural course of the condition treated. Failure in favorable cases may depend on exhaustion of the reactive ability of the body cells, adaptation of bacteria, distortion of the interaction of bacteria and the serum and cells of the body.

Discussion on Vaccine Therapy

Dr. Frank Billings, Chicago: We have used vaccination in various forms of infections at the Presbyterian Hospital in Chicago with satisfactory results *in a certain* class of cases and very unsatisfactory results in others. *In acute* infectious diseases with severe clinical course, as pneumonia, typhoid and especially in chronic infectious endocarditis, *vaccination* certainly seems to do no good, but it does no *harm*. In genitourinary diseases, if there is a morbid condition of the kidney or ureter, or prostate, or if there is a pelvic condition in which there is a distortion of the bladder and poor drainage, *one can* continue vaccination forever and not drive the organisms *out*; but if the physical condition can be overcome, vaccination *may* cause the organisms to disappear. One may vaccinate *forever* and ever when there is a typhoid infection of the gall-bladder, without results. In infections of the antrum, unless it is properly drained, vaccination is of no value.

ILLINOIS STATE MEDICAL SOCIETY

Sixtieth Annual Meeting, held at Danville, May 17-19, 1910

(Concluded from page 1809)

Neurologic Conditions of Joint Diseases

Dr. Archibald Church, Chicago: The anatomic relations of joints and muscles which actuate the joints with the general mechanism of the nervous control give rise to certain functional points which are of importance in the consideration of *joint disease. In* other instances involvement of joints extends *to nerve trunks* in the vicinity, giving rise to symptoms of distal situation. These considerations are of particular importance in relation to neuritis secondary to joint involvement, this giving rise to neuritis due to the involvement of *the filaments* of the nerves within the joints and leading to secondary muscle wastings above the joints and secondly to the wasting below the joints when the nerves which pass the joints are implicated. Another group of joint disorders essentially hysterical in character, without any evidence of involvement of joint surface or joint mechanism, present features of distinctive significance. This condition may also be associated with actual joint lesions.

Joint Diseases from the Orthopedic Standpoint

Dr. John Ridlon, *Chicago: The mechanical treatment of* joint diseases is mainly confined to the treatment of tuberculous joints and to the deformities resulting from joint tuberculosis and other infections. In the mechanical treatment of tuberculous joint diseases one must consider the general principles, together with the relative value of fixation, traction, protection during certain stages, and the stimulating value of *the use of the joint during other stages of the case.* In considering the mechanical corrections of deformed joints, those still diseased are separated from those no longer diseased; and of the latter class which may and which may not be safely corrected without cutting operations other than *occasionally* subcutaneous tenotomies and myotomies.

Gall-Tract Infection

Dr. J. E. Coleman, Canton: The great number of unsuspected gall-stones found postmortem show that more care should be observed by the practitioner in the diagnosis of gall-tract infections, which always precede gall-stone and whose symptoms are always attributed to biliousness. Gall-tract infection is first a medical, then a surgical, then a medical disease, and should receive careful medical treatment before *and after operation*. The case should be referred to the surgeon for operation before adhesions and dangerous complications arise. This makes the operation a very safe one in competent hands. The diagnosis can be aided materially by close *observation* of the stools of the suspected patient and by watching for evidences of degenerative changes in the heart and blood vessels. The practitioner should see to it that the heart tone is fully restored after operation, and this usually requires *months of treatment*. The surgeon is often responsible for this not being done by his nihilistic attitude to medicine.

Persistent Infections in Specific Urethritis in Relation to the Penile Urethra

Dr. B. C. Corbus, Chicago: Persistent infections due to congenital abnormalities are common pathologic *conditions in* genitourinary surgery. Specific urethritis secondary to congenital malformations and localized *infections* (paraurethral abscess) form some of the most stubborn and persistent types of infections. Careful examinations by means of *the modern* methods now at our disposal will often reveal their presence. Early treatment based on the pathology of the condition *offers* the best method of eradicating the infection.

Discussion

Dr. L. B. Russell, Hoopeston: Every case of gonorrheal urethritis should be treated early if possible. When I *insert* the sound I leave it in for ten or fifteen minutes.

Dr. B. D. Baird, Galesburg: Gonorrhea, if neglected beyond a certain point, should almost be classified with the incurable diseases. The gonococcus was demonstrated in the urine in one of my cases seven years after the infection.

Dr. J. G. Fisher, Danville: I recall the case of a man who had had several attacks of specific urethritis. In July he had chills. I thought they were malarial and treated him for such, but quinin was of no value. By examining his urine I found a bacillus which resembled the colon bacillus. No culture tests were made, but according to the appearance and quantity, and its manner of conducting itself, it seemed to be an infection with the colon bacillus, and by putting him on urotropin the condition was somewhat cleared up. But I found this bacillus over quite a period of time following this, and finally his urethritis cleared up.

Dr. Corbus (closing): In regard to the value of antigonococcic serum and vaccine, the general consensus of opinion seems to be at the present time that they are valuable in systematic infection alone, not in local conditions.

Sympathetic Ophthalmia

Dr. E. V. L. Brown, Chicago: A characteristic infiltration of the iris, ciliary body and chorioid has been found to be constantly present in the first eye and consists of plasma cells. Transfer to the second eye does not take place along the optic nerves or by ciliary nerve irritation, but through the general circulation. The specific microorganism is first present in the general circulation and only becomes localized in the eye after the iris, ciliary body or chorioidea have been damaged by a wound or inflammation. It then first develops sufficient virility to attack the healthy chorioidea, etc., of the other eye. This endogenous theory is revolutionary in character, yet it better explains the peculiar localizations of the disease in the uvea and in certain parts of it than does the prevailing exogenous wound infection theory. The difficulties of diagnosis are great for general practitioners and for specialists alike. Syphilis and tuberculosis must be excluded. The prognosis is not invariably bad. Enucleation should help the second eye. Sodium salicylate in large doses, mercurial inunctions, etc., quiet the tissues, but no operations, no light and less atropin.

The Rationale of Infections of the Nasal Accessory Sinuses

Dr. W. L. Ballenger, Chicago: The etiology of infection and inflammation of the mucous membrane of the nasal accessory sinuses should be studied under two general headings—active causes and predisposing causes. The active cause is almost always a pathogenic microörganism, though in exceptional instances the condition may be due to traumatism, and external violence, caustics, hot irrigations, steam, irritating inhalations, etc. The predisposing causes are numerous, although an obstructed lesion of the nose, especially in chronic infection, is an almost constant factor. In primary acute sinusitis obstructive lesions are not so constantly present.

Early Efficient Surgical Treatment of Skull Fracture

Dr. F. C. Schurmeier, Elgin: Injuries of the head are never too insignificant for a most careful and painstaking examination. Where there is suspicion of intracranial trouble the patient should be kept under the eye of a competent observer. When the diagnosis of intracranial pressure is made operation should begin at once, if the seat of trouble is surgically accessible. It is never too late to operate, even though clinically it seems useless, and we fail in the attempt to save life. Operation should not stop short of efficiency when the patient's life threatens to cease.

Symptoms and Treatment of Exophthalmic Goiter

Dr. Cassius C. Rogers, Chicago: Goiter, tremor, tachycardia are usually present, but one or more may be absent. Other symptoms are mental disturbances, gastrointestinal disturbances, paralysis, impairment of vision, cardiac hypertrophy, cough, nephritis, sweating, etc. Special attention should be given to the female pelvic organs. I have not found an exception in exophthalmic goiter where the patient has not suffered with either amenorrhea, dysmenorrhea or menorrhagia. The ovaries are always large and tender. Not infrequently are these cases operated on and one or both ovaries removed. Invariably this is followed by a severe attack of acute exophthalmus. All acute cases should be considered as medical and never operated on until they have recovered, or until the disease has become chronic. Some cases apparently recover without treatment. There is no rule that can be followed in selecting the cases for operation. All acute cases and all cases with marked heart, liver and kidney changes are unfavorable for operation. The size of the goiter is not an index to the symptoms it may cause. Blood examination is of more value in acute than in chronic thyroidism.

The Study of Mental Disorders

Dr. H. Douglas Singer, Kankakee: The study of psychiatry has been evolving proportionately with the conception of mind. Psychologic factors play a large part in the etiology of insanity. Psychiatry presents its most hopeful outlook as a branch of preventive medicine. The promotion of this work by the study of psychological types of personality requires the cooperation of the medical profession as a whole. There is need of more extensive teaching, and especially of facilities for clinical study in the medical colleges.

Prevention and Treatment of Insanity

Dr. Eugene Cohn, Anna: There is urgent need of early treatment in all cases of insanity. It is best that the patient be at once placed in a proper institution. The general practitioner should be able to more readily detect insanity in its incipiency and should vigorously enforce the necessary measures for immediate treatment, for the sooner systematic treatment is begun the better are the chances for recovery. The existence of a sufficient number of psychopathic hospitals should be assured, where the sufferer may receive adequate treatment and observation prior to a formal commitment, by the court to a regular insane hospital or sanitarium. This final measure may not be necessary in many cases, and the patient is thus saved much possible embarrassment.

The Relations and Clinical Significance of Urinary Acidity

Dr. Henry R. Harrower, Chicago: The study of the urinary acidity and its relations is worthy of much wider attention. Its clinical significance is of importance in all disease conditions, but more especially in the definite and obscure chronic diseases. The acid index is a factor of considerably more importance than has yet been supposed and has an intimate relation with the phenomena commonly found with intestinal putrefaction and autotoxemia. The urinary acidity is not only of importance in diagnosis, but also serves as a valuable guide during the period of treatment. The frequent finding of evidences of kidney irritation would lead us to believe that the conditions causing urinary hyperacidity are important predisposing factors in the causation of nephritis. The test for the degree of acidity is simplicity itself and can be easily accomplished either with a burette or an acidimeter. The clinical indications and therapeutic possibilities suggested by these findings will more than repay one for the slight trouble required in making the tests.

A Practical Measure in the Prophylaxis of Postoperative Cystitis

Dr. E. C. Dudley, Chicago: During the past two or three years in all cases in which the catheter was used I have followed its use with the instillation of boric acid and argyrol solution. Whenever I have especially anticipated postoperative cystitis I have had the catheter passed at stated intervals and the boric acid and argyrol solutions used. This tentative catheterization may be quite essential since pelvic operations are apt to be followed by partial retention, and since partially retained urine is especially apt to give rise to cystitis. After perineorrhaphy, for example, the rule that the catheter should be avoided when the patient can relieve herself holds good only when natural urination is complete. Since I have applied the routine treatment of postoperative cystitis to the prophylaxis of cystitis, I have observed freedom from infection, and corresponding relief from a frequent distressing and humiliating sequel to pelvic surgery. The results are fully as satisfactory as are those following the application of a silver solution to the eyes of the new-born.

AMERICAN NEUROLOGICAL ASSOCIATION

Thirty-sixth Annual Meeting, held in Washington, D. C., May 2-4, 1910

The President, DR. MORTON PRINCE, Boston, in the Chair

Cerebral Localization from the Point of View of Function and Symptoms, with Special Reference to v. Monakow's Theory of Diaschisis

DR. MORTON PRINCE, Boston: The doctrine of cerebral localization resolves itself into the question whether the localization is of symptoms or of function or whether it is only an anatomic localization of fibers. It too often happens that the formulas of localization do not work in diagnosis. It not rarely happens that clinical and pathologic findings are contradictory. Thus, on the one hand, extensive lesions in one or other of the recognized cortical centers run their course without symptoms, and, on the other hand, focal symptoms, pointing to disease of these centers, develop in cases in which no anatomic alterations are found at autopsy. There is growing dissatisfaction with the currently accepted doctrine of cerebral localization; a feeling that it is in many respects inadequate. The first blow to the traditional localization of function in the cortex was received when Marie launched his attack on the doctrine of aphasia. Whatever the outcome of the reinvestigation of this question shall prove to be, it is evident that the beautifully diagrammatic conceps of the function of language and of aphasic disturbances of this function have been relegated to the scrap heap of the phantasies of science. The fact, I believe, will be found to be that whether the third left frontal convolution, the first and second left temporal convolution or other areas take part in the function of language or not, the function as a whole, as a psychical process, is a widely distributed one in which are engaged many dynamic processes and anatomic "centers," and a lesion of any one of several "centers" may give rise to all modes of aphasic disturbance. The contest has centered largely around the question whether a lesion of Broca's convolution gives rise to the motor type of aphasia and, therefore, whether in this convolution can be localized so much of the language as is lost in this type.

The clinicoanatomic data themselves are contradictory; as. for example: 1. Lesions of the third frontal convolution do give rise to a clinical aphasic syndrome of the so-called motor type. 2. Destruction of Broca's convolution may be accompanied by simple mutism—or pure motor aphasia of the so-called subcortical type. 3. It also appears to be true that in a considerable proportion of cases of aphasia, characterized by loss of the power of word formation and articulation, Broca's convolution has been found intact. In any theory of aphasia as a clinical syndrome, and in any theory of function these discrepancies must be reconciled. Von Monakow, whose clinical experience and pathologic training entitle his views to great weight, points out the inadequacy of the generally accepted doctrine of localization to account for these contradictory phenomena. He believes that there lies some error in the form in which localization is conceived by most clinicians. To-day, as formerly, two sets of experiences stand opposed to one another—the negative and the positive—and invite anew discussion of the doctrine of localization, which has been declared closed by many writers. How can these contradictions be explained? To answer this von Monakow proposes a theory, which is of the greatest interest and challenges examination, known as diaschisis, and which has for its basis the results of experimental investigations. After removal of focal areas in the cortex, certain symptoms are temporary, while others, which are purely local, are permanent. These latter, or residual, symptoms alone represent the function or part of function that is localizable in a given center. So-called focal symptoms are in large part a complicated reaction of unimpaired areas of the central nervous system to the local cortical lesions. By diaschisis is meant a functional, shock-like inhibition of previously uninjured distant areas produced by the dynamic influences of a lesion anatomically connected with such areas. Through the break in the continuity of the conducting associative paths the eccentrically lying brain foci are robbed of their natural sources of stimulation and in part isolated. Only the directly injured elements give rise to the permanent symptoms and secondary degenerations. So far as the theory definitely distinguishes between the localization of symptoms and the localization of function, I think it may be safely insisted on as the only interpretation that can reconcile the facts of clinical and pathologic observation. The diaschisis theory is fruitful in other fields than that of cerebral localization. For example, its possible applications in the explanation of focal symptoms without focal lesions will occur to everyone.

A Report of Three Prefrontal Tumors

DR. F. X. DERCUM, Philadelphia: In the first and second cases, the tumors were inoperable; the third tumor was removed, but was of enormous size, weighing 7¾ ounces. Death occurred 14 days after operation. The symptoms present in the reported cases are of unusual interest. Vague mental symptoms were present in all. Case 1 suggested symptoms not unlike those of profound cerebral exhaustion of a beginning paresis. Headache had never been a marked feature and was elicited only by questioning. It existed only for a short time previous to death; vomiting occurred but once, and that only toward the very close of the illness. There was absence of optic neuritis and any involvement of the visual fields. The only symptom which was at all suggestive was one attack of slight twitching of the left leg and possibly twitching of the left arm which occurred a few days before the patient came under observation; the attack was very brief in duration and was not attended by loss of consciousness. Occasionally psychic vesical incontinence was present. In the second case there was early headache, optic neuritis and vomiting, all the symptoms being typical and marked. The feature of special interest was the slight flattening of the lower half of the right side of the face and the equally slight involvement of the left leg and arm. These symptoms were in all probability due in part at least to indirect pressure. The subjective sensory disturbances, namely pain and the hypesthesia of the left arm and both legs, are somewhat difficult to explain. The occurrence of typical areas of hysterical painful hyperesthesia under both breasts and over both groins must be borne in mind in considering the other sensory symptoms present. The area of hyperesthesia on the left parietal region was also small and resembled in other respects an area of hysterical hyperesthesia, though it was present on the same side as the tumor. The question arises: Was the left hemiparesis, present for a time only, also hysterical in origin?

In Case 3 optic neuritis was pronounced. Headache was scarcely, if at all, present. Vomiting was absent. This case is remarkable for the size of the growth which had probably existed for a long time previous to the seizure which occurred in the summer of 1908. That so large a growth could have been present and the patient still have been able even in a degree to attend to business and ordinary affairs is very remarkable. Finally, the resemblance of the mental symptoms in Cases 1 and 3 to those of paresis is worthy of comment. In Case 1 the patient was placid, indifferent, and did not manifest the least anxiety as to his condition. In Case 3 the patient was at times distinctly expansive, good-humored and not infrequently laughed and joked. In Case 2 the patient, though quiet, complained greatly at times of suffering; at no time was she jocose nor was there any tendency to laughter or hilarity. Indifference to the sphincters was not observed and there were no epileptiform seizures. The eye muscle symptoms made their appearance late and are probably to be referred directly to the frontal lobe lesion; in part they may have been due to the blindness and the absence of fixation. In many respects these cases conformed to the ordinary observations made in prefrontal tumors. This was particularly the case as regards the mental symptoms which were most marked in Case 3, less marked in Case 1 and least in Case 2. Psychic incontinence was pronounced in Cases 1 and 3. Epileptiform seizures were present but once in Cases 1 and 3 and absent altogether in Case 2. Optic neuritis was present in Cases 2 and 3 and absent in Case 1; the swelling was more marked on the side of the tumor in Case 2 and slightly greater on the side opposite the tumor in Case 3. Local tenderness of the skull was present only in Case 2; was on the same side as the tumor but was parietal and not frontal. Finally, it is interesting to note that in none of the cases was there any ataxia.

It should be added that no x-ray examination was made in Case 1. In Case 2 an x-ray examination was negative. In Case 3 an x-ray examination was also negative, save that it revealed some irregularity of the inner surface of the frontal bone on the right side, and also some apparent thinning of the bone. The possible etiologic value of trauma is well illustrated in Case 1.

DISCUSSION

DR. E. W. TAYLOR, Boston: The two main points brought out are interesting. In the first place the mental condition; in the second place the epileptiform seizure. I presume it is generaly accepted that there is no definite type of mental disease to reveal frontal lobe lesion. I recall distinctly a patient in whom the mental symptoms, instead of being apathetic, were precisely the opposite. The man was a young army officer, previously healthy. He was extraordinarily apprehensive; he developed all sorts of phobias, was unable to go into crowded places, buildings and so on, and presented all the appearances of a mental state. He had slight epileptiform convulsions, which I misinterpreted as hysteroid convulsions. He disappeared from view, and if I had not heard his subsequent history I would have regarded him as a psychasthenic patient. He later came under treatment and died. Autopsy revealed an extensive prefrontal tumor, gliomatous in type, very difficult to distinguish from the brain itself. The points of importance are incidence of slight seizure, epileptiform in character, and, secondly, and still more confusing, are the phenomena one so often sees in the neuroses of psychasthenic character.

DR. EDWARD B. ANGELL, Rochester, N. Y.: I have been impressed with the lack of symptomatology of prefrontal tumors. Many of these patients are without headache, nausea, vomiting or any of the motor symptoms, and without any of the hemiplegias or disturbances of one side of the body. The case of a very successful and intelligent business man came under my observation a year ago. He suddenly became apathetic; his family first noticed this because he received news of a disaster with unconcern. Aside from that condition he had no symptoms whatever. He had an attack of influenza and had quite a nasal discharge and an increase in the white blood cells. Here was a case where there was reason for suspecting acute trouble by extension from the nasal chambers. The mental symptoms were not such as to indicate much pressure. When the man died, and it was shortly, it was found that he had a tumor as large as that of Dr. Dercum's patient in the left prefrontal lobe.

DR. HUGH T. PATRICK, Chicago: What was the state of the sense of smell in these cases?

DR. HERMAN H. HOPPE, Cincinnati: I wish to refer to a symptom-complex which obscured the diagnosis in a case in which there were absolutely no general symptoms of brain tumor. The tumor grew from the sella turcica and involved both portions of the frontal lobes. The earliest manifestations were in reference to the optic thalamus. This man went on with business after developing atrophy of the optic nerve; then he began to develop sluggishness of the pupils. In the subsequent history there was a pure simple dementia, so much so that the diagnosis of dementia paralytica was made. The man died in the insane hospital and autopsy revealed the tumor.

DR. GEORGE JACOBY, New York City: I saw the patient in the case reported by Dr. Dercum and, after seeing and comparing it with two others I had previously seen, it seems to me that we can be very positive that there is no pathognomonic series of symptoms of prefrontal tumors. One way in which diagnosis can be made is by sequence of symptoms or symptoms dependent on pressure. The occurrence of aphasia and involvement of the motor tract and the significance of reflexes are also helpful and indicative of the associated pressure.

DR. E. E. SOUTHARD, Boston: I have found that in some cases it is profitable to examine histologically other parts of the brain than those directly involved in the tumor. I recall a case of tumor of the prefrontal lobe in which epilepsy did not exist but in which there was a unilateral paralysis on the same side as the tumor, and histological study of the precentral gyri showed that for some reason on the opposite side there was absence of cells.

DR. B. SACHS, New York City: I do not know why these tumors are spoken of as prefrontal tumors. There are two points of vital importance in regard to the question of operability. The focal signs in many instances give no idea of the actual size of the tumor and the probable result of an operation. So much depends on shock, which seems to be in direct proportion to the size of the tumor, that one of the most essential points for determining the operability of a tumor is to try to decide whether the tumor is of large size or not and whether the symptoms give one any idea of the size of the tumor. The other points belong to all tumors. A great deal depends on the character of the tumor, particularly in the development of symptoms. There is a great difference in conditions when the brain substance is being invaded by tubercle or sarcoma or when it is being gradually invaded by a glioma; and some of the peculiarities in regard to tumor of the frontal lobe may be explained by the fact that many of these tumors have been slowly invading gliomata, whereas the cases in which the tumor has been much more destructive the symptoms are more marked. The destructiveness of the tumor is in direct relation to the distinctness of the symptoms. I observed a case which had presented during life absolutely nothing else but epileptiform seizures, in which the patient suddenly died from hemorrhage from a tumor which on postmortem examination proved to be a huge glioma involving the entire one hemisphere of the brain. A point we often lose sight of is the different character of the symptoms in relation to different structure of the tumor. Glioma seems to cause fewer symptoms than any other tumor because the brain tissue accommodates itself much more readily to the slow invasion of the glioma.

DR. D. D. WOLFSTEIN, Cincinnati: I wish to refer to a case in which I made the diagnosis of tumor of the frontal lobe. It was in the left frontal lobe and of very large size, but there was absolutely no mental disturbance. The only symptoms were progressive optic atrophy with complete loss of vision. There was a suspicion of epileptiform seizure. Very often these tumors pass far back and tangential fibers which pass through the capsule are involved. Those cases which simulate epileptiform seizures might in this way be explained.

DR. F. X. DERCUM, Philadelphia: In these cases the sense of smell was preserved. In a case which I reported to this association some years ago the sense of smell was destroyed. I think Dr. Southard's position well taken. It seems to me that the epileptiform attacks in these cases were perhaps due to pressure about the base. I am in entire accord with Dr. Sachs' statement in reference to the size of the tumor. The first two cases were round-celled sarcomata; the third was endotheliomata and sprang from the dura of the base. I feel that the term "prefrontal" is justifiable, provided we mean that the tumor has advanced up in front of the motor tract itself.

(To be continued)

OHIO STATE MEDICAL ASSOCIATION

Sixty-fifth Annual Meeting, held at Toledo, May 11-13, 1910

(Continued from page 1809)

Femoral Hernia

DR. GEORGE F. GOODHUE, Dayton: Congenital femoral hernia is unknown. Before the age of 20 it is exceptional, and in children it is a rarity. A consideration of the anatomic conditions involved in this hernia would lead us to infer that its production must be caused by prolonged strain or violent exertion far beyond the ordinary. The connective tissue sheath enveloping the vessels is strong and unyielding in the young and healthy, which explains its greater prevalence in the weak and aged or those exposed to unusual strain in their daily avocations. The greater size of the canal in women, and the firmer character of the inguinal ring in that sex renders this variety of hernia more common in the female. My method of operating for the relief of this condition, which I believe the safer for the average surgeon, closely conforms to that of Bassini, which consists in fastening Poupart's ligament to the pectineal fascia and muscle and sometimes the falsiform ligament to the same structure by catgut sutures. I wish to emphasize the statement made by Ferguson, that in every case of femoral hernia except in extreme old age or infirmity the patient should be subjected to operation for radical cure. This advice is based on the extreme danger of strangulation in this variety of hernia which much sooner become gangrenous owing to the tense, firm sharp border of the ring. This risk to life must never be under-estimated. Trusses—barbarous in every variety—are rarely efficient in this form of hernia. The operation is fraught with little danger and in the hands of experienced surgeons under proper conditions success is assured.

DISCUSSION

Dr. F. F. Lawrence, Columbus: When strangulation occurs it would be well to consider the possibility of the bladder being engaged in the hernia mass, and to recognize what the hernia contains would be important. It has been my practice to expose the sac, tie it off and drop it, and then try to approximate Poupart's ligament either to the pectineal muscle or fascia, thereby making the space on the side of the femoral vein much smaller.

Dr. R. B. Hall, Cincinnati: Of all varieties of hernia the physician is called on to treat the femoral hernia requires most prompt action, for with strangulation the tissues in the sac may become gangrenous in six hours. In one case the vermiform appendix was found in the sac on operation. Recurrence of the hernia would be rare if the technic advocated by Dr. Goodhue were followed out.

Dr. G. F. Goodhue: It is necessary to note the natural course of a descending femoral hernia in order to succeed in reducing the hernia by taxis. I do not think taxis is the proper measure to resort to, except as a temporary expedient, as when the case is seen in emergency or before transporting the patient to a hospital. Another point I wish to emphasize is the desirability of introducing the stitches through the pectineal muscle and fascia well down on the pubic bone, so that the ligament is brought well down over the surface of the muscle and fascia instead of just having the edges approximated.

Instruments Used and Points of Technic of the Major Smith Cataract Operation

Dr. D. T. Vail, Cincinnati, gave a detailed description of each instrument Smith uses in his operation, and related the arguments he presents to prove the advantages of each of these instruments over any other pattern in common use. He also exhibited a complete set of instruments, original and not original, which Smith uses in doing the operation, and gave arguments to prove that these simple instruments meet all the demands which arise in every operation for cataract, whether in or out of the capsule. He mentioned the dangers that an operator invites who attempts to extract cataracts in their capsules by the employment of the ordinary set of instruments, and sounded a note of warning to those who would exercise the courage to undertake the Smith operation, so-called, as a routine practice without thorough knowledge and appreciation of the principles which underlie successful extraction in the capsule.

Prognosis in the Traumatic Neuroses

Dr. Louis Miller, Toledo: There are few diseases which have received more attention concerning their prognosis than the wide group of diseases known as the traumatic neuroses; although specialists have been more or less at variance in their opinions on the subject, yet not so much so as general practitioners and often other members of the profession. This is especially true of those cases which are the subjects of litigation. While much of the disagreement may be placed to the blame of the prejudice attending taking sides with the parties in cases, which are the subjects of litigation, all cannot be thus explained. The difficulty lies partly in the inherent complexities of the conditions with which they have to deal, such as exact diagnosis; partly to the confusions of nomenclature. In recent years authors are coming closer together in their views of prognosis, but one still reads opinions which give impressions considerably at variance. In the term traumatic neuroses I include only functional disorders resulting from violence, *i. e.*, hysteria and neurasthenia and states which cannot be separated clinically from them. The disorder has been designated as accident aboulia, traumatic hysteria, traumatic neurasthenia, and other terms, but traumatic neurosis is comprehensive and will probably lead to less confusion if adhered to universally. Admitting then that these neuroses do not constitute a distinct disease entity, but are either neurasthenia or hysteria, or a combination of them, we can say in general that the prognosis is that of those two affections.

Malingering and Its Detection

Dr. E. E. Gaver, Columbus: It is in the field of psychiatry or neurology that we encounter the majority of cases of malingering. Malingering is divided into three varieties—exaggeration, substitution and entire simulation. Exaggeration of disease is the most common endeavor, and is usually found in the functional diseases, such as hysteria and neurasthenia. In the organic diseases there is sufficient pain without additions or exaggeration. The substitution of origin of a disease is difficult to detect in a well-trained criminal. Physical defects form a prominent basis for fraudulent substitution of origin. A defective eye, a scar on the head or neck, or defective hearing commonly form the basis for claims. Entire simulation is the real true form of malingering and is the comparatively rare form. Very few attempts to defraud by such means are now successful. Physicians are most concerned in the detection of malingering. The symptoms in nervous diseases most commonly feigned are disturbances of vision and hearing, anesthesia, convulsions, contractions, paralysis, tremors, disturbances of gait, pain and hyperesthesia. The visual malingerer is usually turned over to the ophthalmologist for detection. An ordinary stethoscope is a useful adjunct in detecting any fraud in the claim of deafness. By connecting the stethoscope, either branch of which can be separated at the will of the examiner, in the ears of the patient and operating from behind it is usually a simple matter to conduct sound to either ear singly or simultaneously and with ordinary cleverness in manipulation the operator will reveal hearing in both ears if it really exists. In testing for feigned loss of sensation we must bear in mind the fact that most individuals can nerve themselves to the point of withstanding extreme pain. Defeat, however, is almost certain to follow the unexpected application of painful stimuli, such as the faradic current or some sharp instrument.

It is usually in an effort to play the part of an epileptic that convulsions are feigned. An examination of the subject, if he is a malingerer, will not reveal the scarred tongue and head the result of injury, the pupils will continue to react, and the reflexes are not lost. Paralysis is one of the most common symptoms simulated. Paralysis is usually accompanied by atrophy, changes in the reflexes, electrical reaction of degeneration, vasomotor disturbances. The simulation of tremor is difficult and should be fairly easily detected. A useful test is to place the subject on the belly, and if he can press his toes on the bedding the tremor can be maintained, but should the legs be flexed at the knees the tremor ceases. The more irregular a tremor the less possibility of its being real. There is no known means of determining whether a pain is real or fraudulent. Judgment must be passed on weight of evidence afforded by accompanying symptoms or signs. Continued severe pain soon impairs nutrition and sleep. According to some authorities, pressure over a tender area will increase the pulse rate often as much as 20 beats a minute and in some instances it produces sweating. Disturbances of gait usually carry with them other signs impossible to simulate.

"Pole Ligation" for Exophthalmic Goiter

Dr. J. H. Jacobson, Toledo: In a preliminary report on this method made in October, 1909, I formulated the following conclusions:

1. Ligation of both poles of the thyroid acts first by diminishing the blood supply to the gland, and thus diminishing immediately its activity; secondly, by directly diminishing and preventing the gland secretion from entering the general circulation by way of

the main lymphatic channels and veins which leave the thyroid body at its upper poles; and thirdly, by causing a subsequent atrophy of the gland itself.

2. The pole ligation is much easier to perform than ligation of the thyroid vessels, and may be as effective as a partial thyroidectomy.

3. It does not disturb the blood supply of the parathyroid glands, nor endanger the recurrent laryngeal nerves.

4. Theoretically, at least, and from the simplicity of its performance, it would seem that pole ligation should entirely supplant the operation of simple ligation of the thyroid vessels in Basedow's disease, and in many cases the necessity of partial thyroidectomy.

5. As a preliminary operation to partial thyroidectomy for Basedow's disease it will be found of great value.

6. At present, we are warranted in saying that pole ligation offers the prospect of cure in many cases, and of lasting improvement in others.

7. The operation of pole ligation is a safe one, and in skilled hands should have no mortality.

Subsequent experience with this operation has shown these conclusions to be correct. Theoretically at least it seems that the ligatures should be placed extracapsular, for the reason that the lymphatic vessels of the gland parenchyma empty into those contained within the capsule and that the extracapsular ligature will more effectually stop the gland excretion. We are confronted by many difficulties in estimating the effect or value of any operation for the relief of this disease, particularly as to what constitutes a cure in these cases. All these patients are improved by the operations of partial thyroidectomy, ligation of arteries, or pole ligation. In only a very small number do all the symptoms entirely disappear. It is obvious that the same conditions confront us in estimating the end-results of partial thyroidectomy.

DISCUSSION

DR. JAMES DONNELLY, Toledo: In making the double ligature one can notice, when tying it, that there is immediately a blanching of the gland, showing that there has been considerable decrease in the quantity of blood sent to it. Dr. George W. Crile has shown that the nerve connection has been an element in the successful treatment of the condition.

DR. S. J. FOSTER: While ligation of the artery is theoretically easy, yet at times it has been found very difficult, and the operation now advocated of extracapsular ligation is a distinct advance, because of its ease of execution. Besides, there is practically no mortality and the end-results of the operation promise a great deal.

DR. J. H. JACOBSON: The exact distribution of nerves to the thyroid gland is not known, but reasoning by analogy is the same as in other portions of the body, so that in putting a ligature around the pole, we get the arteries, veins, nerves and lymphatics. I think the lymphatics are the most important. It has been shown that the thyroid secretion gets into the circulation through the lymphatic glands. In many of these cases the lymphatics are found to be enlarged at operation. Cross-section of the glands shows a deposit in them of colloid material.

Pneumonia with Severe Abdominal Symptoms Simulating Acute Disease of the Region

DR. H. J. WHITACRE, Cincinnati: A review of the literature on this subject shows that the condition is by no means infrequent. Surgeons of wide experience and unquestioned ability have committed the error of operating on the abdomen, and the error is at times unavoidable. An incomplete history and physical examination as a rule will be the direct explanation of most errors. These cases usually arise as grave emergencies. The surgeon is called for an acute appendicitis—he finds a history of sudden onset with severe pain and vomiting, an elevation of pulse and temperature, the right rectus rigid, and he neglects all further examination of the patient. There are certain points which will be of value in the diagnosis: (1) The countenance of the patient will not be peritonitic, and there is apt to be some grade of cyanosis; (2) the tongue is moist and not coated; (3) respiration is frequent, out of all proportion to the pulse rate, and costal in type—there is often a definite catch at the end of inspiration; (4) abdominal rigidity is less circumscribed than in appendicitis and is very great—the abdominal wall relaxes for a moment with each inspiration; (5) abdominal sensitiveness may be local, unilateral or general, but is always superficial, deep pressure is not painful; (6) a sudden high temperature (continuous) has been observed very frequently, which is not true in appendicitis; (7) a careful objective examination of all organs is most necessary. The explanation of the abdominal symptoms is not clear. In many cases it seems most probable that the pain, sensitiveness and rigidity are to be explained by an irritation in continuity of the lower six dorsal nerves. Irritation of the seventh, eighth and ninth nerves will cause pain in the epigastrium, and will simulate gall-bladder disease or ulcer of the stomach, while irritation of the tenth and eleventh nerves will cause signs in the appendix region. In other cases, the sensations are purely reflex and result from irritation originating in the lung, which are transmitted either through the costal group or through the vagus to produce visceral pains. The intestinal paralysis which has been prominent in many cases has been explained by some as the result of toxemia; by others, as a reflex disturbance of the splanchnic system.

Prostatectomy

DR. W. D. HAMILTON, Columbus: Experience gives us great confidence in the perineal operation, while for some cases in which the gland has developed considerably at the expense of the intravesical space, so that it may be more accessible from above, the high operation is occasionally of great service. The low operation is anatomically more difficult in the average case, and may be followed by several conditions which may be regarded as unfortunate results: (1) incontinence of urine; (2) stricture of the urethra; (3) urethrorectal fistula; (4) damage to the sexual function; (5) fistula. My first report contained a tabulated list of seventeen patients on whom prostatectomy had been done with 4 deaths. Since the publication of that paper, the operation has been done 43 times in the practice of Dr. Charles S. Hamilton and myself. Of the 43 cases, 9 were for malignant disease, and 34 for benign lesions. Of the malignant cases 8 were adenocarcinoma, and 1 of round-cell sarcoma; of the 9 patients, 3 died, and 6 recovered. Of the 34 benign cases, 4 patients now in the hospital are at various stages in their apparent convalescence. Of the 30 operated on for benign lesions, 3 have died and 27 recovered. This would make a mortality in this latter series, and covering the benign cases only, of 10 per cent. Of the 34 cases it may be of interest to observe that 26 of them were adenofibromata.

(To be continued)

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

EMPLOYERS' LIABILITY AND WORKMEN'S COMPENSATION LAWS IN THE UNITED STATES

By Chauncey Rea Burr, M.D.
PORTLAND, ME.

Under the title of "The Federal Compensation Act of 1909," a measure is before Congress which, if passed, will go far to remove our reproach among nations for the indifference with which hitherto we have treated our injured workmen.

It is remarkable that up to the present time no demand loud enough to be heeded has come from the workingman to indemnify his dependents in case of his own death from accident occurring in the line of his employment, or to pension him for permanent disability.

The empire builder, Prince Bismarck, appreciated the worth of the human machine and provided statutory enactment to pay for it when damaged or destroyed. Incidentally he dealt the socialist cause in Germany the hardest blow it has ever had. In the earlier part of the Nineteenth Century the right of the workmen to redress from accident was that of anyone else, viz.: in order to recover damages, he must prove default on the part of the person who injured him. To prove default on the part of the employer or his agents was often a difficult if not impossible matter even when this was known to exist. The explosion of a steam boiler might not only kill all the witnesses to the accident, but might so alter the surrounding as to render it impossible to secure evidence as to the cause. The industrial expansion of the Nineteenth Century, with a corresponding increase of industrial accidents, and an increase of killed and maimed workmen, swelled the ranks of the destitute and added to the misery and discontent of the submerged classes. Hence it became a matter for the government to investigate. Between the years 1883 and 1900 a series of laws was passed in Germany providing for indemnity against disease, accident or death among workmen; such indemnity to be paid by an assurance society whose solvency was secured by legislation. In 1883 a law for compulsory insurance against loss of wages from sickness was passed, one-third of the cost to be borne by the employers and two-thirds by the workmen. In 1884 a similar law against loss of wages from accident was passed. Five supplementary laws followed and in 1900 all were grouped under one law, which placed the whole burden of compensation for accident on the employer.

In 1889 a law was passed providing for pensions for old age and invalidism, the cost of which was divided between the state, the employer and the employee. The classes who benefit by this insurance are limited to those employed in mines, salt works, quarries, smelters, factories, railways, steamboats, agricultural operations, lumbering and forestry, building trades, breweries, warehouses, butchering, well digging, domestic service, and also seamen, longshoremen, blacksmith, locksmiths, chimney-sweeps and window cleaners. Such persons injured during their work are entitled to free medical treatment, medicine, sick-pay (i. e., two-thirds of the daily wages) and hospital care, if necessary, for a period of thirteen weeks. With the beginning of the fourteenth week the case comes under the care of the "Trade Association," composed of employers and employees engaged in the same industry, which fixes the amount of the indemnity. This varies with the disability. If total, the full amount of the yearly wage is paid as a pension in monthly instalments; if partial, a proportionate amount only is paid, as high, it may be, as two-thirds. Fraud is guarded against by compelling each pensioner to be examined by the trade association physician every six months. Thus pensions may be increased or diminished or stopped altogether, as the condition of the recipient warrants. Should the workman be killed as the result of the accident, the widow, if there is one, is entitled to burial expenses, and twenty per cent. of her late husband's yearly wage during her widowhood. If she remarries she receives a lump sum of sixty per cent. of the yearly wage in full discharge. Each minor child of the deceased is entitled to twenty per cent. of his father's yearly wage till the age of fifteen years; and dependent parents or grandparents are entitled to the same twenty per cent. pension *per capita.*

These laws have proved to be the prototype of most of the European legislation on employers' liability and workmen's compensation, which has been enacted in recent years. Thus Austria legislated on the subject in 1887 and 1888; Norway in 1894, 1897 and 1899; Finland in 1895; Great Britain in 1897 and 1908; Denmark in 1897; Italy in 1898 and 1903: France in 1898 and 1902; Spain in 1900; Greece in 1901; Sweden in 1901; Russia in 1904; Belgium in 1903. One or the other of two principles runs through this legislation. The first may be defined as the principle of the personal liability of the employer to his workman; the second, as the principle of compulsory insurance. Sometimes an attempt is made to combine the two.

In 1908 the United States made her first essay into the field of workmen's compensation for accident. May 30, 1908, an act was passed "granting to certain employees of the United States the right to receive from it compensation for injuries sustained in the course of their employment." The persons eligible under this act are such as are "employed by the United States as artisans or laborers in any of its manufacturing establishments, arsenals or navy yards, or in the construction of river and harbor or fortification work, or in hazardous employment or construction work in the reclamation of arid lands or the management and control of the same, or in hazardous employment under the Isthmian Canal Commission." If such persons die as the result of an accident received in the course of their employment, their dependents shall be entitled to receive for the remainder of the year the same amount that the deceased would have received as wages for the same period.

If the employee shall be "injured in the course of such employment," he shall be entitled to receive for one year thereafter, unless in the opinion of the Secretary of Commerce and Labor he be able to resume work sooner, the same pay as if he had continued to be employed. No payment to be made, if the injury is due to the negligence or misconduct of the employee, nor unless the disability continues for more than fifteen days. Provision is also made for a medical examination of the injured employee at least once in six months, by order of the Secretary of Commerce and Labor.

In this act no distinction is made between partial and total disability. Defective as this law is, it was apparently the opening wedge for more comprehensive legislation. Feb. 10, 1908, a bill "to provide compensation for injuries to employees solely engaged in interstate and foreign commerce, to which the regulative power of Congress extends" was introduced in the House of Representatives by Hon. Adolph J. Sabbath of Illinois. In introducing his bill Mr. Sabbath said: "In the course of an experience of over twelve years on the bench in Chicago, one of the greatest cities in the world, every kind and class of cases were brought before me. My duty not only consisted in enforcing the laws, but in attempting to alleviate the misery and the damages caused by our modern economic system. This last function was impressed on me by the horrible cases of breaking up of families, degradation of the widows and ruin of the daughters, caused by the loss of the father's or brother's earning power. Years and years of litigation, appeals, new trials and all the necessary steps of our modern procedure brought it about that the results of the litigation were wasted; and social degradation of the family, without any fault of their own, ensued. . . . The object of my compensation bill, as of all compensation acts, is to correct what heretofore has amounted to a denial of justice." This bill failed of passage, and on March 15, 1909, Mr. Sabbath introduced a somewhat different measure, entitled, "A bill to require persons carrying on occupations and trades subject to the regulative power of Congress to pay compensation to employees injured, and to change the general law for injuries received on mail routes." This bill, the federal compensation act of 1909, which it is the object of this paper to describe, applies only to the employees of common carriers engaged in interstate and foreign commerce or in transporting the mails, which are subject to the regulative power of Congress. Such common carriers include steam railroads, electric roads, and vessels which convey the mails, express companies and sleeping-car companies operated on a mail route. Whenever the employee of such a common carrier is injured, the latter shall pay the former compensation without requiring an action at law to be brought. The amount of compensation is governed by a schedule annexed to and made a part of the act.

For the purpose of carrying into effect the provisions of the act a commission to consist of three members is established, to be known as the "Federal Commission of Injury Awards." The principal office is to be at Washington, although "whenever the convenience of the parties may be promoted or delay or expense prevented thereby, the commission may hold its sessions in any part of the United States." When an employee is injured or killed, the common carrier must notify the commission, and this in turn notifies the employee or his widow or next of kin of their right to compensation. It then remains for the employee, his widow or next of kin to decide whether they will accept compensation under this act or bring suit for personal damages. It is further provided that in any future contracts with common carriers for forwarding the mails, the Postmaster General is forbidden to sign such till the common carriers agree to the indemnity stipulations.

The schedule of injury awards is as follows: For death due to injury in the course of his employment the employee's widow or dependent next of kin is entitled to an annual pension of seventy per cent. of the deceased's monthly wages, during their life or while they are entitled thereto; i. e., a widow forfeits her pension by remarriage, or a minor child on reaching a working age. If there is no widow or dependent next of kin, then only the medical, surgical and burial expenses shall be paid. No disability shall be paid for which does not exceed two weeks. For total disability not exceeding six months there shall be paid one-half of the monthly wages for that period, as well as hospital, surgical and medical attendance. For total disability continuing after six months, there shall be paid two-thirds of the weekly wage during the period of said impairment. When the earning capacity is materially impaired through partial disability, one-half of the weekly wage is to be paid. When the earning capacity is slightly impaired, through partial disability, one-fourth of the weekly wage is to be paid; provided that such disability is not covered in the following scale of percentage awards.

The scale referred to deals with the loss or total impairment of certain parts of the body and follows very closely the order given in "Instructions to Examining Surgeons" issued by the Bureau of Pensions, Washington, D. C. The awards, however, are not the same, although in many cases approximate. On the whole they are larger. The scale is too long to give in full, but enough follows to give an idea of its scope. The figures show the percentage of the earnings which will be paid as an annual pension for the stated disability.

SCHEDULE OF AWARDS

Loss of one eye, 40 per cent.; loss of hand, 40; loss of foot, 40 to 50; loss of an arm at or above the elbow or a leg at or above the knee, 45 to 60; loss of either a leg at the hip-joint or of an arm at the shoulder-joint, or so near as to prevent the use of an artificial limb, 40 to 60; loss of thumb, 20; loss of index finger, 06; loss of great toe, 08; ankylosis of shoulder, 30; ankylosis of elbow or knee, 25; ankylosis of ankle or wrist, 20; total deafness of one ear, 25; hernia, 20 to 50.

A distinction is made between the right hand and the left as to their respective values. Thus, "loss of thumb, index, middle and ring fingers" is rated at 25 per cent.; while "loss of thumb, index, middle and ring fingers of right hand" is rated at 40. The difference in value between a right and left hand can only be in a difference of skill between the two, for very few persons are ambidextrous. If therefore a skilled workman who is right-handed, loses his right hand, he loses something more than the hand. He loses skill, the ability to compete with his fellows, the power of earning the same pay. There is in short a loss of competing power as well as a loss of physical power. Everybody recognizes this where the hands are concerned, but it is not so easy to realize when the injury is internal and out of sight. In a given case these separate elements of damage ought to be considered and rated separately before a just estimate of the total damage to the earning power can be arrived at. The bill, however, while not entering in detail on this more extended field, very cleverly covers it by providing one rate when the earning capacity is "materially impaired" and another when it is but "slightly impaired." These are vague terms, but the award is not. On the whole the bill leaves but little to be desired, and Mr. Sabbath is to be congratulated on the masterly way in which he has grappled with the problem, and it is to be hoped that Congress will think likewise and enact the bill into law.

In the last analysis the public will pay the cost of these pensions in increased freight charges or mileage, but it is worth it. As the government pays pensions to its soldiers and sailors and certain of its civil employees, and by this bill, if passed, the railroads to their employees, it is unfair that workmen in general should not under like circumstances have pensions paid them. Perhaps in time this will come here as it has in Germany through the medium of "trade associations." For the purpose of comparison, the following table is appended, which shows what the various nations have done in the way of pensioning their disabled workmen.

TABLE SHOWING THE ACTION OF VARIOUS NATIONS IN THE WAY OF PENSIONING DISABLED WORKMEN

Country.	Total and permanent disability.	Partial and permanent disability.
Germany	An annual pension equal to the full amount of the yearly wage.	Proportionate pension up to two-thirds of yearly wage.
Austria	An annual pension of 0.60 of yearly wage.	A pension of not more than 0.50 of yearly wage.
Norway	An annual pension of about $41.50.	Proportionate pension, but none unless earning power is diminished at least 0.05.
Great Britian.	An annual pension of 0.50 of yearly wage.	Proportionate pension.
Denmark	A lump sum equal to six times the annual wage, but not less than $500 nor more than $1,335.	A lump sum computed on basis of earning power lost.
Italy	A lump sum equal to six times the annual wage, the minimum being $600.	A lump sum equal to six times the amount by which the annual wage has been reduced, the minimum being $100.
France	An annual pension of 0.67 of yearly wage.	An annual pension equal to 0.50 of earning power lost.
Spain	A lump sum equal to two years' wages.	A lump sum equal to one year's wage or work at the same pay as before the accident.
Holland	An annual pension of 0.70 of yearly wage.	Proportionate pension.
Sweden	An annual pension of $83.33.	Proportionate pension, but none unless earning power is diminished at least 0.10.
Russia	An annual pension of 0.67 yearly wage, with permission to commute this for a lump sum equal to ten times the yearly wage in full discharge.	Proportionate pension.
United States	A lump sum equal to one year's pay (Act of 1908). An annual pension of 0.67 of yearly wage (proposed Act of 1909).	A lump sum equal to one year's pay (Act of 1908). Proportionate pension (proposed Act of 1909).

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Fourth Weekly Meeting

MIGRAINE

ETIOLOGY: Heredity, age, sex, gout and rheumatism, eyestrain, gastrointestinal disorders, etc.

SYMPTOMS: Premonitory. Sensory symptoms, visual disturbances, photophobia, tingling, numbness of extremities, motor symptoms, paresis, aphasia, "ophthalmoplegic migraine." Headache, location, duration, degree. Nausea and vomiting. Vasomotor symptoms. Course of disease and prognosis.

TREATMENT.

TICS

DEFINITION: Etiology: Age, heredity, associated neurotic taint, emotions, local irritation.

VARIETIES: Facial tic, blepharospasm, mental torticollis, coprolalia. Frequency, character, location and extension of spasms.

Monthly Meeting

Psychotherapy in the Treatment of the Psychoneuroses.
The Diagnosis and Differentiation of Hysteria.
The Diagnosis and Treatment of Epilepsy.

Medicolegal

Illegal Practice of Medicine by "Masseur Doctor"—Texas Law Explained

The Court of Criminal Appeals of Texas says, in Newman vs. State (124 S. W. R. 956), that the evidence showed that said Newman inserted in a local paper an advertisement which read: "Prof. J. M. Newman, the Masseur Doctor, has located," etc. "He is the doctor that cures consumption, appendicitis, as well as all other diseases. Now is your time to be healed. Come and see him while he is here." Soon thereafter he undertook to treat a number of persons for sundry ailments, including warts, fever, kidney diseases, and stammering. Testifying in his own behalf, he stated that he was a doctor and a great one; that he could cure the diseases that the M.D.'s could cure, and the diseases that they could not cure; that he had treated various patients of various ailments, and received pay for his services in so doing; that he never used or prescribed medicine in treating his patients; that he used only the massage treatment; that he only rubbed patients for their ailments, and at no time pretended to be a physician or surgeon; that he did not practice medicine, but was opposed to the use of any medicine to effect cures. It was shown by the clerk that he had filed no license or authority to practice medicine.

Section 10 of the Texas medical practice act of 1907 provides that the act shall not apply, among others, to masseurs, in their particular sphere of labor, who publicly represent themselves as such. A fair analysis of section 13 classifies the practitioners who shall be subject and amenable to the law. First, it includes any one who shall publicly profess to be a physician, and claim to effect cures by any system or method; and, second, those who shall treat or offer to treat any disease by any system or method, or to effect cures thereof, and charge therefor. Evidently the words "system or method" were intended to be wide enough in their scope to reach any and every school of medicine, whether based on the administration of pills, potions, or pellets, or the modern—as many persons believe, excellent—system of osteopathy or massage. The history of legislation on this subject in Texas shows that heretofore the Legislature, in dealing with the practice of medicine, had attempted to classify the different branches, and provide for boards for the different schools. Evidently the ineffectiveness of these laws was brought to public attention, because it is certain that the Thirtieth (1907) Legislature, with a view of closing every avenue of escape on technical grounds, and for the protection of the public health, as well as individual citizens, against the quack faker and charlatan, undertook to provide that any person shall be regarded as a practitioner of medicine who professes for pay to cure any kind of disorder or injury by any system or by any method.

The first statement in the advertisement put out by the accused characterized him as a masseur doctor. He advertised himself to be the doctor, and to cure consumption, appendicitis, as well as all other diseases, and warned the public, "now is your time to be healed." Pursuant to his invitation, many people did call to see him, to be healed of their troubles. Can it be said that this man was not holding himself out as a physician, as one who treated and cured diseases? Can it be said that he did not, in the sense that the Legislature understood this term and method or system of treatment, know he was not exempt on the mere ground that he did not use drugs and medicines or surgical instruments?

He was charged with unlawfully engaging in the practice of medicine without having first registered and filed for record the certificate required by law. He was undoubtedly guilty under all the proof, and a judgment of conviction is affirmed.

Admissibility in Evidence of Testimony as to Statements by Patients

The Springfield, Mo., Court of Appeals says, in the personal injury case of Brady vs. Springfield Traction Co. (124 S. W. R. 1070), that a physician who was called to visit the plaintiff after her injury, in testifying as to the condition in which he found her, was permitted to repeat some statements made by her to him in response to questions asked her by him during the examination. It was claimed that this was hearsay and self-serving, and should have been excluded. It was held in Missouri in the case of Gartside vs. Insurance Co., 76 Mo. 446, that such statements could not be admitted in evidence, but that case was overruled by the case of Groll vs. Tower, 88 Mo. 249, the latter case was followed in the case of Squires vs. City of Chillicothe, 89 Mo. 226, and it has since that time been the settled law of the state that such testimony is admissible. The rule is that a physician in describing the result of an examination of a patient may give statements of the patient made to him in the course of the examination which relate to the condition of the patient at the time and which give the physician information proper for him to have in determining the condition of the patient, but statements made by the patient which relate to her past condition or to the circumstances surrounding the injury or the manner in which she received it are not admissible.

"Insanity" Arising During Progress of Difficulty No Defense

The Supreme Court of South Carolina says, in the assault case of State vs. Coyle (67 S. E. R. 24), that "insanity" arising during the progress of a difficulty, voluntarily brought on by the defendant and as the result of a blow rightfully inflicted by his adversary, should not constitute excuse for his after conduct in such difficulty. The reason which sustains the settled law in South Carolina—that voluntary intoxication is no excuse for crime—applies with great force in a case of this kind. Furthermore, the court considers that the barbarity of the defendant's conduct, in beating and cutting the other party a number of times with a knife, afforded no evidence of irresponsible insanity.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

May 19

1 *The Frequency and Dangers of Fibroids of the Uterus. E. B. Young and J. T. Williams, Boston.
2 Tuberculosis of the Elbow. J. W. Sever, Boston.
3 Rupture of the Uterus in Labor at Term. C. M. Green, Boston.
4 The Treatment of Constipation. M. V. Tyrode, Boston.
5 *Cancer in Massachusetts in 1905. W. F. Whitney, Boston.

1. Fibroids of Uterus.—The following conclusions are drawn by Young and Williams from the study of 971 autopsy records obtained from the Boston City Hospital:

1. Fibroids of the uterus occur in from 7 per cent. to 16 per cent. of all adult females, and in from 7 per cent. to 22 per cent. of all over thirty-five years of age.

2. The age at which fibroids giving rise to symptoms which demand their removal are most commonly encountered is shown by American statistics to lie between thirty-five and forty-five, and by German figures between forty and fifty.

3. Fibroids may, in the main, be divided into three groups: (a) Fibroids of considerable size, nearly all of which produce symptoms. (b) Fibroid polyps, and submucous fibroids which project markedly into the uterine cavity. (c) Small and symptomless fibroids.

4. In fibroids of considerable or large size complications and degenerations dangerous to life occur in at least 10.5 per cent. and for this reason alone the routine removal of all such tumors is indicated.

5. In submucous tumors and fibroid polyps necrosis occurs in over 43 per cent. and the excision of all such growths is, therefore, indicated.

6. Small and symptomless fibroids are absolutely innocuous and of such frequent occurrence that they may safely be let alone. Such tumors, however, when met with in the course of operations for other conditions, should be removed when feasible, because there is always the possibility that they may increase in size.

5. Cancer in Massachusetts.—From the statistics quoted by Whitney it would appear that cancer has really increased in Massachusetts. The rate has rather more than doubled from 1850 to 1875, and almost doubled again from 1875 to 1900. This is true whether the rate for persons at all ages, or persons over thirty years of age, are considered. If the separate sexes and the different decennia of life are compared there is rather more irregularity, but in the main these also give the same result. If the same rate of increase should continue in the future, it is easy to calculate that in 1950 there would be 6,000 deaths to every million persons living over thirty years of age, against the 1,600 deaths in 1900. For 1850 the cancer death-rate for all persons over thirty years of age is 375 for each million living, while for the year 1900 it is 1,578, a difference between them of about 1,200. This would give an average rate of increase for each five years of 120.

Medical Record, New York

May 21

6 *The Scaphoid Scapula. W. W. Graves, St. Louis.
7 Hygienic Principles of Ventilation. W. A. Evans, Chicago.
8 The Local Hospital Sanitarium as One of the Most Important Phases in the Antituberculosis Crusade. S. A. Knopf, New York.
9 The Recognition of Dementia Præcox. S. P. Goodhart, New York.
10 *Tabes and Muscular Atrophy. E. L. Hunt, New York.
11 Case of Alkaptonuria. C. Mitchell, Chicago.
12 Examination of Duodenal Juice Obtained by the Gross Duodenal Tube. F. v. Oefele, New York.
13 Abrams' Method in the Treatment of Aneurism of the Thoracic Aorta. L. St. J. Hely, Madera, Cal.

6. **Scaphoid Scapula.**—An article on this subject by the same author will appear shortly in THE JOURNAL.

10. **Case of Tabes and Muscular Atrophy.**—The patient whose history is given here by Hunt showed Argyll-Robertson pupils, loss of knee-jerks, presence of the Romberg sign, and great ataxia in all the extremities. At the same time, he showed a progressive muscular atrophy beginning in the hands and extending to the neck and scapular muscles—an atrophy which evinces fibrillary twitchings and a diminished electrical response. It is an atrophy which has advanced with considerable rapidity. Another feature of the atrophy is that it involved not the legs, but the arms, and that it has steadily progressed from the interossei of the hands to the scapular muscles and the face.

New York Medical Journal

May 21

14 e, New York.
15 . Child, Jr., New York.
16 * uptured Tubal Gestation be Im- Summers, Omaha, Neb.
17 General Practice with Bacterial Detroit.
18 Bacterial Treatment of Malignant Disease. H. A. Duncan, Philadelphia.
19 Sensitization of Cancer. J. W. Vaughan, Detroit.
20 Uremia with Terminal Cerebral Hemorrhage. E. P. Magruder, Washington, D. C.
21 *Possibly a Way for Cure of Seminal Vesicle Infection. C. E. Barnett, Fort Wayne, Ind.
22 Serodiagnosis of Syphilis (continued). V. C. Pedersen, New York.

16. *Abstracted in* THE JOURNAL, *April 2, 1910, p. 1158.*

21. *Abstracted in* THE JOURNAL, *April 23, 1910, p. 1400.*

Kentucky Medical Journal, Bowling Green

May 1

23 Our Duty to Ourselves, Our Patients and Our Fellow Practitioners. J. E. Wells, Cynthiana.
24 The Toxemias of Pregnancy. E. L. Godby, Campbellsville.
25 Early Diagnosis of Tuberculosis. J. H. Chrisman, Owenton.
26 Operative Interference in Acute and Chronic Emergency. H. Grant, Louisville.
27 Diagnosis of Gall-Stone Disease. J. L. Ransohoff, Cincinnati.
28 Four Cases of Appendicitis. J. T. Dunn, Louisville.
29 What is the Doctor Doing? A. W. Cain, Somerset.
30 Idem. J. W. F. Parker, Somerset.
31 When Should a Surgeon be Consulted in Appendicitis? J. T. Dunn, Louisville.
32 Hydatidiform Mole with Remarks. C. C. Garr, Lexington.
33 Pancreatic Diseases. V. Blythe, Paducah.
34 Dividing Professional Fees. M. D. Mann, Buffalo.
35 Indications for Operative Interference in Acute and Chronic Emergency Conditions. H. H. Grant, Louisville.
36 Malarial Fever. C. W. Rogers, Rineyville.

Journal Experimental Medicine, Lancaster, Pa.

May

37 Studies on the Venous Pulse. J. A. E. Eyster, University, Va.
38 *Survival of Engrafted Tissue. C. C. Guthrie, Pittsburg, Pa.
39 *The Changes in the Venous Bloodflow *on Administration* of Amyl Nitrite. R. Burton-Opitz and H. F. Wolf, New York.
40 Changes Induced in the Blood of Rabbits by Living in an Atmosphere of Water Gas. G. G. Nasmuth and F. C. Harrison, Toronto.
41 *Studies in Edema: Influence of Adrenalin on Absorption from the Peritoneal Cavity. M. S. Fleisher and L. Loeb, Philadelphia.
42 *Carcinoma of Brook Trout (Salvelinus Fontinalis): Its Relation to Ordinary Goiter. D. Marine and C. H. Lenhart, Cleveland, Ohio.
43 The Complement Binding Test in Rabies. J. L. Berry and A. Mann, New York.
44 *Experimental Comparison of Transplanted Tumor and a Transplanted Normal Tissue Capable of Growth. P. Rous, New York
45 The Relation of Combined Intoxication and Bacterial Infection to Necrosis of the Liver, Acute Yellow Atrophy and Cirrhosis. E. L. Opie, New York.
46 *Studies in Water Drinking. C. C. Fowler and P. B. Hawk, Champaign, Ill.
47 The Quantitative Changes in the Proteins in the Blood Plasma of Horses in the Course of Immunization. R. B. Gibson and E. J. Banzhaf, New York.

38. **Survival of Engrafted Tissues.**—The most complete results have been obtained by Guthrie with ovaries in fowls. In auto-intra-abdominal as well as in subcutaneous transplantations, excellent morphologic results have been obtained. In iso-intra-abdominal ovarian grafts between fowls and between guinea-pigs, functional activity, in addition to anatomic structure, has been completely preserved. Evidence of the complete functioning of such transplanted ovaries is afforded by the altered characters in the offspring.

The ovary of a pure bred white hen was removed and in its place an ovary from a pure black hen was engrafted. Subsequently the white hen laid eggs, and on being mated to a pure white cock, such eggs were incubated and from them were hatched white and black chicks. As yet there is no evidence that simple mutilation of the ovary is a factor in these results. In the single case in which degeneration of an ovary engrafted into a fowl has been observed no eggs were laid. Furthermore, all control hens have produced eggs. On the whole, Guthrie says, we may be reasonably certain that ovarian tissue engrafted into fowls, as in these experiments, may develop and preserve its functional powers to a high degree.

Results with testicles are less complete, no offspring having as yet been produced from engrafted testicles. However, morphologically, the results seem as perfect as with the ovaries, engrafted testicular tissue showing a marked growth and normal structure almost four months after the operation. Transplantation of ovaries and testicles with anastomosis of the nutrient blood vessels have not been practiced sufficiently to permit of comparisons or conclusions. Guthrie says that since results are readily obtained in certain animals hitherto employed by the simple method of transplanting there has been no need for the more complicated operation. But there are good reasons for believing that in larger and older animals, as well as under less favorable conditions, successful results will, perhaps, be more certain after transplantation with anastomosis of the blood vessels than after the simpler operation.

39. **Changes in the Venous Blood Flow.**—While the amyl nitrite invariably produced a marked lessening of the arterial blood pressure, the venous pressure retained its normal value in all cases in which the drug was permitted to exert a general effect of ordinary magnitude. When an artificial circulation through the normal leg was established and inhalations of amyl nitrite were given, no changes in the flow of the perfusion fluid could be detected. It appears, therefore, that the vasodilatory effects of this drug are not incited with the help of central nervous structures.

41. **Studies in Edema.**—Fleisher and Loeb found that adrenalin injected intraperitoneally increases the rapidity of absorption of fluid from the peritoneal cavity, independently of whether the solution to be absorbed is hypotonic or hypertonic or is approximately isotonic with the blood serum. The intravenous injection of adrenalin also increases the absorption of fluid, but not so markedly as does the intraperitoneal injection. Adrenalin injected either intraperitoneally or intravenously increases the quantity of sodium chlorid absorbed. The relative absorption of sodium chlorid—the movement from the peritoneal cavity of sodium chlorid, as compared with the movement of water—is slightly increased when 0.85 per cent. of sodium chlorid solution and adrenalin are injected intraperitoneally; but it is diminished when adrenalin is injected intravenously, or when 1.5 per cent. sodium chlorid solution and adrenalin are injected. When distilled water has been injected intraperitoneally, adrenalin decreases the relative amount of sodium chlorid through the kidneys under the influence of adrenalin.

When 0.85 per cent. sodium chlorid solution is injected into the peritoneal cavity, the blood becomes diluted after two hours and a half. When adrenalin is also injected, the dilution of the blood is less marked, in spite of the increased absorption under the influence of adrenalin. When distilled water is injected into the peritoneal cavity, the blood is diluted equally in control and adrenalin experiments. When 1.5 per cent. sodium chlorid solution is injected, the dilution of the blood is very slight, and in adrenalin experiments it is the same as in control experiments or very slightly greater than in control experiments. The injection of adrenalin causes a temporary increase in the osmotic pressure of the blood, which gradually returns to normal.

In experiments in which 0.85 per cent. sodium chlorid solution was injected intraperitoneally, either with or without adrenalin, there existed a tendency of the peritoneal fluid to attain a greater osmotic pressure than the blood serum. The authors noted a similar condition in cases of general edema in man, in which the osmotic pressure of the ascitic fluid is greater than that of the other edematous fluids or even than that of the blood serum. There exists, therefore, a mechanism that causes the passage of osmotically active substances from the blood or from the tissues into the peritoneal cavity, and that causes the osmotic pressure of the peritoneal fluid to become higher than that of the blood.

The addition of 1.22 per cent. calcium chlorid solution to 0.85 per cent. sodium chlorid solution, increased directly the transudation into the peritoneal cavity merely by inhibiting the absorption.

It follows that adrenalin does not increase the amount of peritoneal transudate found after the intravenous infusion of large quantities of sodium chlorid solution, to which adrenalin has been added, by delaying the absorption from the peritoneal cavity. The increased amounts of peritoneal fluid must be due to increased transudation into the peritoneal cavity; and the adrenalin, in view of its marked effect on absorption from the peritoneal cavity, must increase the movement of fluid into the peritoneal cavity much more strongly than could be assumed from the figures obtained in the infusion experiments.

42. **Thyroid Carcinoma of Brook Trout.**—Marine and Lenhart conclude that the so-called carcinoma of the thyroid of brook trout is, in its early stages at least, nothing more than severe endemic goiter. The possibility that this physiologic hyperplasia may, in some instances, go over into carcinoma is not denied and is in harmony with the more modern views of cancer development. Prevention and cure is favored by adjusting the amount of food and the number of fish to the water supply or by the addition of iodin-containing substances to the water passing through the ponds.

44. **Comparison of Transplanted Tumor and Normal Tissue.**—Rous' paper deals with a comparison of the conditions which determine the fate of transplanted tumor and of a transplanted normal tissue capable of growth. Mouse embryo and mouse-tumor were employed as material. It was shown that individuals differ as hosts for transplanted embryo, some being naturally resistant to its growth, and some favorable, just as is known to be the case where tumor is concerned. The fate of implanted tumor depends directly on whether it elicits from the host a vascularizing stroma. So, too, it is with implanted embryo. Furthermore, mouse embryo, like mouse-tumor, when introduced into rats calls forth a stroma and grows for a brief period.

In attempting to answer the question as to whether individuals favorable (or resistant) to implanted tumor are likewise favorable (or resistant) to implanted embryo, it was shown that the factors of age, nutritive condition, and race, which are potent in determining an animal's status as a tumor-host, act similarly in determining that for embryo. Using embryonic tissue and a method which has proven effective for the production of immunity to implanted tumor, an immunity to implanted embryo was brought about. This immunity manifests itself in the same way as that for the implanted tumor, namely by an absence of the stroma-reaction necessary to life of the engrafted tissue.

Rous believed that these results demonstrate how largely tumor obeys in its adaptation to a new host and growth therein, the general laws regulating a transplanted normal tissue. Besides the phenomena here dealt with, many others that have held the attention of workers with transplantable tumors are probably not peculiar to neoplasms. The present findings emphasize the importance of the tumor-problem as a tissue problem; and they further indicate how essential it is in cancer work to discriminate between characters unique with tumor and those which it possesses in common with normal tissue.

46. **Water Drinking.**—The daily drinking of three liters of water with meals, for a period of five days, by a man 22 years of age, who was in a condition of nitrogen equilibrium through the ingestion of a uniform diet, was productive of the following findings: 1. An increase in body weight, aggregating two pounds in 5 days. 2. An increased excretion of urinary nitrogen, the excess nitrogen being mainly in the form of urea, ammonia, and creatin. 3. A decreased excretion of creatinin and the coincident appearance of creatin in the urine. The decreased creatinin output is believed to indicate that the copious water drinking has stimulated protein catabolism. The appearance of creatin is considered evidence that the water has caused a partial muscular disintegration resulting in the release of creatin, but not profound enough to yield the total nitrogen content of the muscle. The output of creatin is, therefore, out of all proportion to the increase in the excretion of total nitrogen. 4. An increased output of ammonia which is interpreted as indicating an increased output of gastric juice. 5. A decreased excretion of feces and of fecal nitrogen, the decrease in the excretion of fecal nitrogen being of sufficient magnitude to secure a lowered excretion of both the bacterial and the non-bacterial nitrogen. 6. A decrease in the quantity of bacteria excreted daily. 7. An increase in the percentage of total nitrogen appearing as bacterial nitrogen. 8. A lower creatinin coefficient. 9. A more economic utilization of the protein constituents of the diet.

The general conclusion reached by Fowler and Hawk as the result of this experiment is to the effect that the drinking of a large amount of water with meals was attended by many desirable and by no undesirable features.

Mississippi Medical Monthly, Vicksburg

May

48 The Indications and Contraindications for Curettage. G. S. Bryan, Amory.
49 Fibrinous Pneumonia in an Infant. B. S. Hood, Bond.
50 Diagnosis of Pelvic Inflammations. B. H. Durley, Aberdeen.

Lancet-Clinic, Cincinnati

May 7

51 Modern Treatment of Tuberculous Joints. J. L. Porter, Chicago.
52 Sanitation of Barber Shops. G. A. Persson, Mt. Clemens, Mich.
53 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
54 Section Teaching of Obstetrics. W. D. Inglis, Columbus, Ohio.

Illinois Medical Journal, Springfield

May

55 *Prognosis of Angina Pectoris. F. Forchheimer, Cincinnati.
56 Chronic Colitis. G. D. Kahlo, French Lick, Ind.
57 Fibroma Uteri in the Non-pregnant and Pregnant. A. B. Keyes, Chicago.
58 Perineal Prostatectomy. A. H. Ferguson, Chicago.
59 The Tuberculosis Question in Relation to the Organs of Digestion. F. B. Turck, Chicago.
60 The Resection of Bony Deflections of the Nasal Septum. O. T. Freer, Chicago.
61 The Septal Spur and its Removal. F. G. Stubbs, Chicago.
62 Recent Use of Stovain in Chicago. H. F. Lewis, Chicago.
63 Advance in Therapeutics. C. M. Riley, Alton, Ill.
64 Eye Symptoms in Diabetes. H. Gradle, Chicago.
65 *Diagnosis and Treatment of Plumbism. B. Fantus, Chicago.
66 Neglected Sources of Infection. J. Casey, Chicago.

55. **Angina Pectoris.**—In common with all other observers, Forchheimer finds that angina pectoris is more common in the male than in the female, in the ratio of 63 to 48. The youngest patient in his series of cases was 29 years old, the oldest 76. The longest duration of the recurring syndrome was 17 years, the shortest was found in three who died in the first attack.

Consideration of the various forms of angina pectoris shows the following: In coronary sclerosis there were 56 cases in all; i. e., 29 cases without other appreciable changes in the heart and 27 with other changes. Evidences which Forchheimer considers as pointing to coronary sclerosis are the existence of angina pectoris and certain changes in the aorta or the aortic valves.

In the aorta we find as evidence of sclerosis, some dilatation. Most frequently a soft aortic systolic bruit is detected, which sets in a little after systole, most commonly combined with an accentuation of the second aortic sound, especially characteristic when the blood pressure is low. Over the aortic area are found systolic bruits, differing much in character, sometimes soft, sometimes harsh, but as a rule unlike those of aortic sclerosis due to other causes. Moreover, the second aortic sound is accentuated, which Forchheimer says is a fairly reliable differential sign between arteriosclerotic changes in the valve and in the ordinary form of aortic stenosis.

In one case of syphilitic endarteritis there existed angina pectoris of a very severe type, the physical evidence of a mitral lesion and of myocardiac insufficiency. In 27 cases which were developed on other diseases, the before-mentioned signs were present. The co-existing diseases were chronic myocarditis in 12, mitral lesion in 6, aortic lesions in 4, obesity of the heart in 4, alcohol, diabetes, chronic nephritis, of each, 2; syphilis and cirrhosis of the liver, 1. Nearly all of these had evidence of arteriosclerosis.

In the cases of angina in which coronary sclerosis alone existed we find three dead in the first attack and seven others dead. Of the latter two died of diabetic complications, one of complicating pneumonia in the status anginosus, death being due to acute cardiac dilatation, one of a cerebral and another of a gastric hemorrhage. So that, in all, in only 6 cases could death be attributed to the coronary sclerosis. The duration of the disease in these cases varied from 16 months to 17 years, and all were males. In the 29 cases of coronary sclerosis there is but one female.

When the obstruction is due to thrombosis or embolism, the attack is usually fatal, either immediately or later on, as the result of changes in the myocardium. The attack is always immediately fatal when one coronary artery is closed. As a rule, death occurs instantaneously where the descending or circumflex branches are completely closed, but occasionally the patient survives for a few days as is shown by myocardial infarcts found post-mortem. Forchheimer's experience leads him to believe that when both cardiac asthma and angina pectoris are present from the onset, the outlook for improvement is very small. But he does not agree with Neubürger who states that in coronary sclerosis there are three stages of myocardial changes, which develop and which are always fatal.

So far as the duration of the disease is concerned, aside from those who died in the first attack, in eight the disease lasted from 1 to 2 years; in four from 2 to 4 years, and in 1 for 17 years. Of those alive, four have had the disease from 8 to 10 years, the same number from 5 to 8 years, and 10 from 4 to 5 years.

65. **Plumbism.**—The three indications in the curative treatment of plumbism are, Fantus says, 1, to stop the introduction of the poison into the system; 2, to favor its elimination; and, 3, to antagonize the disturbances produced by it. To stop the introduction of the poison, usually means prompt change of work, not only temporarily, but permanently. An individual who has once suffered from lead poisoning is extremely susceptible to its recurrence, and recurrence in an aggravated form. In favoring the elimination of lead, our first care should be to obtain free evacuations of the bowels, two or three a day, which are sometimes difficult to obtain owing to the obstinate constipation present. It is a mistake, says Fantus, to use in this condition, purgatives that act largely on peristalsis. The salines, and among them most especially magnesium sulphate, should be used in large and frequent doses. The action of the purgative can best be reinforced by the administration of atropin which antagonizes the intestinal spasm, and the use of large oil enemas which are as useful here as they are in other forms of spastic constipation.

After the bowels have been freely opened, and not until then, potassium iodid should be given in doses of 5 grains (0.3 gm.) three times daily. Its exhibition should be accompanied by the free use of water. Anything that increases metabolic activity favors the elimination of the deposited lead. Sweat baths with or without the use of sulphids are useful. A sulphur bath may be obtained by dissolving six ounces of potassium sulphuret in half a tubful of water. But above all, does daily work in the sweat of the brow, preferably out of doors, answer the indication; and this is the kind of work physicians should advise their patients to take up at least for a while.

Journal Medical Society of New Jersey, Orange

May

67 Dysmenorrhea: Its Significance and Treatment. P. B. Bland, Philadelphia.
68 The Treatment of Acute Inflammation of the Middle Ear and Mastoid Process. G. B. Wood, Philadelphia.
69 The Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.
70 Autointoxication Resulting from Restricted Diet. W. W. Beveridge, Asbury Park.

Texas State Journal of Medicine, Fort Worth

May

71 Tumors of the Testicle. J. B. Shelmire, Dallas.
72 Neuroretinitis Hemorrhagica. W. A. Rape, Victoria, Tex.
73 The Need for Education on the Question of Sex and Venereal Diseases and Problems Involved. M. M. Duggan, San Antonio.

Surgery, Gynecology and Obstetrics, Chicago

May

74 Pathology and Clinical Significance of Gastric Ulcer. W. C. MacCarty, Rochester, Minn.
75 *Mixed Tumors of the Uterine Body. I. C. Herb, Chicago.
76 Nutritional Changes Occurring in Fibromyoma of Uterus Incident to Pregnancy and the Puerperium. H. D. Fry, Washington, D. C.
77 Relationship Between the Thyroid and Parathyroids. J. Halpenny, Winnipeg, Canada.
78 Forcible Dilatation of the Kidney Pelvis as a Means of Diagnosis. G. L. Hunner, Baltimore.
79 The Operative Treatment of Tumors of the Hypophysis. A. E. Halstead, Chicago.
80 *Necrosis of the Bladder with Exfoliation. R. F. O'Neil, Boston.
81 A Silk Thread as a Guide in Esophageal Technic. H. S. Plummer, Rochester, Minn.
82 Removal of Foreign Bodies from the Bronchi. F. Huber, New York City.
83 Pin Remo[illegible] ision of Left Bronchus with Aid of [illegible] T. Norris, New York.
84 Surgical [illegible] Christiania, Norway.
85 *Measuring [illegible] enal Pelvis. H. W. Baker, Boston.

75. **Mixed Tumors of the Uterine Body.**—Mixed tumors of the uterine body, contrary to those of the cervix, are of infrequent occurrence. Herb found only 8 authentic reported cases, including the one mentioned by her. The youngest patient was 40 years of age. Menstruation had been irregular for 4 years. All the other women were past the menopause, their ages varying from 50 to 62 years. The clinical symptoms, without exception, were pelvic pain, accompanied by a watery or bloody vaginal discharge, which was fetid in some of the cases. The symptoms were of short duration, being from one to six months. A positive and correct diagnosis from curettage was not made. All the women had borne children. All the tumors sprang from the tubal region, except two, which developed in the posterior uterine wall.

They were all single tumors, except Hunziker's, in which there was a hazel-nut size subperitoneal growth which he considered a metastasis. In Penkert's case the tumor, which was 7.7 cm. long and 6.5 cm. wide, sprang from a pedicle scarcely 1 cm. in diameter. In Herb's case the tumor mass extended entirely through the uterine wall; however, it could readily be differentiated from the surrounding musculature. They usually fill the uterine cavity and present an irregular polypoid surface, with dark necrotic areas. They are of rather soft consistency and a grayish or yellowish white color.

Microscopically besides sarcomatous tissue and the different forms of connective tissue, smooth and striated muscle, small cysts, cartilage, and tissue resembling carcinoma may be present. Metastases to other organs or involvement of regional lymph glands were not observed. One patient died of exhaustion seven days after total extirpation. All of the remainder whose histories were followed after operation died from local recurrence within six months, except Lawen's patient, who lived one year.

80. **Necrosis of Bladder with Exfoliation.**—O'Neil claims that necrosis of the bladder occurs as a result, primarily, of interference with the circulation of the organ, aided by bacterial infection. The interference with circulation may be produced by mechanical pressure outside the bladder, or by bacterial inflammation within the bladder wall. The condition is more common in women than in men. The clinical symptoms are vague. Retention (when associated with cystitis) which cannot be relieved with catheter should excite

suspicion. There is a typical cystoscopic appearance by which the diagnosis can be made if the examination is made at a certain time. The prognosis as to life, on the whole, is good in women. In severe cases permanent injury to the urinary function will result. The prognosis in men is good if the membrane is removed. Operative treatment is always indicated in men, occasionally so in women.

85. **Measuring the Capacity of the Renal Pelvis.**—The apparatus devised by Baker consists of a glass burette graduated into c.c. and of 100 c.c. capacity. It is filled with sterile methylene blue solution. A rubber tube leads from the burette, which is fitted into the ureteral catheter by a glass connection. From the top of the burette a rubber tube leads to an air pressure gauge which is fitted with a cautery inflating bulb. With the ureteral catheter in the renal pelvis the bulb is inflated and the fluid is forced into the kidney pelvis under a uniform pressure. When the renal pain occurs, indicating that the kidney pelvis is distended, the reading of the pressure gauge is taken and the amount of fluid which has passed from the burette into the renal pelvis is seen at a glance.

Journal Oklahoma State Medical Society, Muskogee

May

86 Comatose Pernicious Malaria. C. S. Neer, Vinita.
87 Mexico from a Doctor's Standpoint. A. K. West, Oklahoma City.
88 A Legal Decision of Interest to the Medical Profession. Justice Dunn, Supreme Court, Oklahoma.

St. Louis Medical Review

April

89 Diphtheria from the Medical Standpoint. R. J. Bunch, St. Louis.
90 Diphtheria. W. D. Black, St. Louis.
91 The Surgical Treatment of Diphtheria. J. W. Shankland, St. Louis.
92 Diphtheria from the Neurologic Standpoint. H. Unterberg, St. Louis.

Virginia Medical Semi-Monthly, Richmond

May 13

93 Diagnostic Significance of Dyspepsia. S. Lile, Lynchburg.
94 Formation and Duties of Local Boards of Health. H. B. Wood, Philadelphia.
95 *A New Operation for Prolapsus Uteri. C. S. Venable, San Antonio, Tex.
96 Symptoms of Puerperal Sepsis. R. M. Taliaferro, Lynchburg.
97 Inflammation of the Frontal Sinus. A. D. Wood, Bluefield, W. Va.
98 Uncinariasis: Observations on its Spread and Eradication. W. A. Brumfield, Brookneal.
99 Surgery of the Thorax and its Viscera. B. M. Ricketts, Cincinnati.

95. **New Operation for Prolapsus Uteri.**—In Venable's advocated procedure, the uterus is lifted to the lower angle of the abdominal wound, the fundus grasped with the tenaculum forceps and held. The thumb and forefinger of the operator are now passed in front of the broad ligaments on either side, respectively, and approximated behind the uterus. The points of the broad ligament easiest approximated are brought together, or if sufficient relaxation does not present for them to meet, a corresponding point on either side is brought to a point on the postero-lateral aspect of the body of the uterus, exerting sufficient tension to see that if so held the uterine position will be as desired and these are selected as the sites for the introduction of a suture. A half-curved, round needle with chromic gut is then passed from before back through the broad ligament just below the ovarian vessels and carried behind the uterus, entering the wall on the postero-lateral aspect as the fundus rounds off to the body and emerges at a similar point on the opposite side; the broad ligament of the left side is now grasped in the same manner, and the needle passed from behind forward below the ovarian vessels, through the left broad ligament. The operator, still holding the left broad ligament, now passes the needle from before backward through the lowest point that it has been ascertained will meet or correspond with a similar point on the opposite side. The needle is then entered into the lateral posterior aspect of the uterus on a line parallel with the suture line above, and emerged at a similar point of exit for the left broad ligament. The suture is then tightened, and if laid correctly the uterus will be swung forward; the tension on the round ligaments producing an anteversion—the sacro-uterine ligaments are made taut and the posterior fornix elevated. If this is the case the hold is relaxed and the posterior surface of the uterus between the points of exit and entrance of the ligature is denuded, as are the portions of broad ligaments that are to come in contact with these denuded surfaces. The suture is again tightened and tied as a mattress suture; the approximated edges of the broad ligament are sutured with continuous catgut in a French needle. The relaxation of the round ligaments may be so great that while this procedure supports the uterus, these are not sufficiently tightened by it, when it will be advisable to add Baldy's procedure or a modification thereof, by fastening the round ligaments behind the fundus with sufficient tension to maintain an antiversion as well as support.

St. Paul Medical Journal

May

100 The Acute Stage of Infantile Paralysis. O. Medin, Stockholm, Sweden.
101 Early Diagnosis of Poliomyelitis. G. W. McIntyre, St. Peter, Minn.
102 The Hospital Laboratory: Special Reference to Diagnosis in Surgical Cases. L. B. Wilson, Rochester, Minn.

Journal of Cutaneous Diseases, New York

May

103 The Elastic Tissue of the Skin. C. J. White, Boston.
104 Multiple Benign Cystic Epithelioma and Multiple Fibroma in the Same Patient. E. W. Ruggles, Rochester, N. Y.
105 Psoriasis with Unusual Symptoms and History. W. F. Breakey, Ann Arbor, Mich.

New York State Journal of Medicine, New York

May

106 Vaccine Therapy in Colon Bacillus Infection of Urinary Tract. F. Billings, Chicago.
107 Vaccine Therapy in Surgical Tuberculosis. L. L. McArthur, Chicago.
108 Treatment of Surgical Tuberculosis by Vaccines. J. MacLeod and N. K. MacLeod, Buffalo.
109 Chronic Glanders Treated by An Autogenous Vaccine. A. T. Bristow and B. White, Brooklyn.
110 Treatment of Pelvic Infections: Special Reference to Bacterial Vaccines. F. L. Oastler, New York.
111 Adequacy of the Present Day Treatment of Syphilis Tested by the Occurrence of Syphilitic Diseases of the Nervous System. J. Collins, New York.
112 The Wassermann and Noguchi Complement-Fixation Tests in Leprosy. H. Fox, New York City.
113 *Has Therapeutics Kept Pace with the Advance of Other Branches of Medical Science? C. W. Dennis, Goshen.
114 Anesthetics and Anesthesia. R. Cordner, Middletown.

113. **Therapeutics and Medical Science.**—The future hope of the therapeutic art as applying to drugs, Dennis believes lies along the following lines: Dropping out of the pharmacopeia hundreds of medicines which are of doubtful utility or which are with difficulty prepared with accuracy or which duplicate each other in their range of action. The state should provide a laboratory in which would be made examination and tests of medicines to determine their strength and purity, and a law should be made prescribing a fine and punishment for offering for sale medicinal substances varying materially from a standard as defined in the U. S. P. In addition, skilled men should be employed to determine physiologically, when possible, the positive effects of drugs most commonly used. More careful observation should be made and recorded by medical men of the effects of medicines clinically; single remedies should be used more frequently; the ready-made prescription should be largely, if not entirely, dispensed with, as it cultivates habits of carelessness and indolence.

Louisville Monthly Journal Medicine and Surgery

May

115 Indications for Operative Interference in Acute and Chronic Conditions. H. H. Grant, Louisville.

Philippine Journal of Science, Manila

December, 1909

116 *Specific Treatment of Carcinoma. A. F. Coca and P. K. Gilman, Manila.
117 *The Cutivation of the Leprosy Bacillus. M. T. Clegg, Manila.
118 Balantidium Coli Infection with Autopsy. F. B. Bowman, Manila.
119 The Difference in Susceptibility to Cattle Plague Encountered Among Cattle and Carabaos. E. H. Ruediger, Manila.
120 Tuberculosis in the Philippines. E. R. Whitmore, Manila.

116. **Specific Treatment of Carcinoma.**—The protoplasmic substances of malignant epithelial tumors in human beings can be injected subcutaneously in large quantities without injurious results. In three cases affected with carcinoma, such

injections given by Coca and Gilman have been followed by the softening and disappearance of tumor masses measuring in diameter from 2 to 4 centimeters. In a fourth case, a rapidly growing lump appeared near the site of the excised cancer two days after treatment. Several days later, when the lump had reached a diameter of 4 centimeters the growth ceased and subsequent microscopic examination showed it to be a firmly encapsulated mass of dying epithelial-like cells. Three other surgically absolutely inoperable cases, in two of which visible amounts of cancer tissue were left unexcised, have remained until now, i. e., for from five weeks to six months, free from recurrence of the disease.

Seven other cases have remained free from a return of the disease for from one to seven months. Two of these were designated as "curable by operation;" three were designated as "probably curable by operation;" and two were designated as "of doubtful curability by operation." In only one case has the disease returned after treatment. In this case the material used for vaccination was rendered inert by too vigorous disinfection. Hitherto no case of sarcoma has come to treatment; however, in view of the failure of the procedure to affect the course of Hodgkin's disease, the outlook for sarcoma is not promising. Tumor cachexia is not increased by the rapid absorption of large quantities of tumor tissue; on the contrary, large injections of tumor material seem to cause the disappearance of the cachexia.

Further experiments seemed to indicate: (1) that the efficacy of the treatment is indirectly proportional to the amount of malignant tissue left in the body, and, within certain limits, directly proportional to the amount of tumor-cell substances injected and to the number of such injections made; (2) that a carcinoma in one individual can be successfully treated with injections of material from a carcinoma of the same kind taken from another individual; (3) that one-half per cent. of carbolic acid does not destroy the "vaccine" within 36 hours if the latter is kept at a temperature of 7 C.

117. **Cultivation of Leprosy Bacillus.**—Attempts have been made by Clegg to cultivate the leprosy bacillus from the spleens of lepers and from cutaneous nodules in cases of leprosy in 10 instances. In 8 out of the 10 instances an acid-fast bacillus was observed to multiply in successive transplants of the cultures of amebas to which the leprosy material had been added. Control plates of the ameba culture without the addition of leprosy material showed no acid-fast organisms present. By heating such an ameba-cholera-leprosy culture a half hour at 60° C. and incubating, isolated colonies of the leprosy bacillus were obtained which grew readily in pure culture when transplanted to the ordinary laboratory media (nutrient agar, bouillon, coagulated egg medium, etc.).

Guinea-pigs inoculated subcutaneously with the pure culture developed in some instances lesions at the site of inoculation which bear a certain resemblance to the leprous lesions of man, both macroscopically and when sectioned and examined under the microscope. The acid-fast organisms were found at the site of inoculation and in some instances also in the spleen. In one instance the acid-fast organism was cultivated from a lesion in a guinea-pig. These guinea-pigs as well as others which received intraperitoneal injections, invariably died during the third or fourth week after inoculation. Inoculations into monkeys have yielded as yet only negative results. The majority of the lepers from whom the material for these cultures was obtained, had tuberculous lesions in their lungs, but the tissues used for the cultures showed no evidence of tuberculosis. The animal inoculations proved that the acid-fast organism cultivated was not the tubercle bacillus.

Ophthalmology, Seattle, Wash.

April

121 Congenital Absence of the Choroid with Retinitis Pigmentosa. E. W. Alexander, San Francisco.
122 The Extraction of Cataract Within the Capsule. A. Elschnig, Prague, Austria-Hungary.
123 Removal of the Cataractous Lens within its Capsule. J. W. Wright, Columbus, Ohio.
124 Expression of Cataract in the Capsule. D. W. Greene, Dayton, Ohio.
125 Tuberculosis of, and About the Eyes. R. Kerry, Montreal.
126 The Present Status of Calmette's Conjunctival Reaction in the Diagnosis of Tuberculosis. F. P. Calhoun, Atlanta, Ga.
127 Does Optic Atrophy in Tabes Develop from a Disease of the Ganglion Cells or From the Nerve Fibers? H. Rönne, Copenhagen, Denmark.
128 So-called Doubling of the Puncta Lacrimalia. F. T. Tooke, Montreal.
129 Pneumocele of the Lacrimal Sac. R. H. Elliot, Madras, India.
130 Metastatic Panophthalmitis. C. M. Harris, Johnstown, Pa.
131 Phlegmonous Inflammation of the Lids. N. H. Goodenow, Seattle, and E. F. Chase, North Yakima, Wash.
132 [illegible] of Orbital Affections Occasioned by [illegible] Report of the Cavernous Sinus. W. [illegible]

Bulletin Johns Hopkins Hospital, Baltimore

May

133 *Experimental Hypophysectomy. S. J. Crowe, H. Cushing and J. Homans, Baltimore.

133. **Experimental Hypophysectomy.**—The authors found in agreement with Paulesco, that a state of apituitarism due to the total removal of the hypophysis leads inevitably to the death of the animal, with a peculiar and characteristic train of symptoms (*cachexia hypophyseopriva*). That these symptoms are not due to surgical trauma or postoperative complications is evidenced by the facts (1) that the same operative manipulations leaving the hypophysis in place and omitting the single step of removal leads to no symptoms whatsoever, and (2) that incomplete removal produces no immediate disturbances. However, even in the case of adult animals death need not occur after a total removal as promptly as Paulesco claimed; puppies may remain in an apparently normal condition for at least three weeks before the terminal phenomena appear. These same symptoms after the same intervals of time, follow the removal of the entire *pars anterior* alone, even though the posterior lobe remains in place. On the other hand, removal of the posterior lobe (necessarily leaving a small amount of *pars intermedia*) not only leads to none of the manifestations of *cachexia hypophyseopriva*, but does not appear to affect the physiologic balance of the animal in any symptomatic way, unless the convulsions and excessive sexual activity which have been seen in a few cases can possibly be ascribed to its absence.

Separation of the hypophyseal stalk, owing to circulatory disturbances, is comparable either to a partial hypophysectomy or to a total removal with immediate reimplantation of the excised tissue elsewhere in the body. The gland becomes reattached and the pathways for posterior lobe secretion (supposed to traverse the *pars nervosa* on its way to the infundibular cavity) may become obstructed by the scar, leading to an accumulation of "hyalin" within the channels of the *pars nervosa*.

Definite constitutional disturbances which may be regarded as manifestations of hypopituitarism have been observed after partial (anterior lobe) removals in a number of animals kept under observation for long periods of time. The most striking feature is a state of adiposity accompanied by (or resultant to?) a secondary hypoplasia of the organs of generation in adults or by a persistence of sexual infantilism in case the primary hypophyseal deficiency antedates adolescence. Polyuria, glycosuria, alterations in the skin and its appendages (such as edemas and hypotrichosis), the tendency to a subnormal body temperature, and psychic disturbances are more or less frequent accompaniments—all of them symptoms which occasionallly occur with states of adiposity and of sexual infantilism in man, in company with certain pituitary body tumors—states, therefore, which presumably are due to hypophyseal (anterior lobe) deficiency.

Animals, in states of hypopituitarism, appear to have a lowered resistance to infection, exposure or disease, conditions which are apt to precipitate the onset of *cachexia hypophyseopriva*. It has been possible, by glandular transplantations, or by injections of anterior lobe emulsion, definitely to prolong the life of animals after total hypophysectomy, and likewise to tide over periods of threatened *cachexia hypophyseopriva* in animals retaining anterior lobe fragments which temporarily may be physiologically insufficient. Boiled anterior lobe emulsions appear to elicit a characteristic (anaphylactic?) febrile response when injected subcutaneously in states of experimental hypopituitarism.

Buffalo Medical Journal

May

134 A Department of Public Health. R. L. Owen, Washington. D. C.
135 The Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.

Atlanta Journal-Record of Medicine

April

136 End Results of Non-removal of the Appendix in 23 Abscess Cases. R. M. Harbin, Rome, Ga.
137 Stimulation During Anesthesia. W. A. Selman, Atlanta, Ga.
138 Aneurism. H. Ainsworth, Thomasville, Ga.
139 Empyema. W. D. Gaines, Lafayette, Ala.
140 Pellagra. D. N. Sage, Atlanta, Ga.
141 Eclampsia. O. L. Stephenson, Roanoke, Ala.
142 La Grippe. E. P. Green, Hickory Flat, Ala.
143 Increasing Frequency of the Use of Narcotic Drugs by Members of the Medical Profession and the Probable Reasons for it. W. C. Ashworth, Greensboro, N. C.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 7

1 Embryologic Problems in Relation to Medicine. P. Thompson.
2 *Itching Diseases of the Skin and their Treatment. J. L. Bunch.
3 The Practice of Wassermann's Reaction from the Quantitative Standpoint. B. Klein.
4 *Comparative Value of the Various Methods of Antisyphilitic Treatment. C. Gibbs.
5 Progressive Destruction of Teeth Sockets: Chronic General Periodontitis. J. F. Colyer.
6 The Bacillus Influenza and Symbiosis. R. W. Allen.
7 Removal Through the Mouth of a Shawl Pin Impacted in a Secondary Bronchus. S. Thomson.
8 Cerebellar Abscess and Acute Suppurative Labyrinthitis. J. Harper.
9 The Use of Solid Carbon Dioxid. E. R. Morton.

2. **Treatment of Itching.**—According to Bunch, internal treatment should begin by giving preparations of salicylic acid, salol, sodium salicylate, carbolic acid in pill form, arsenic and atropin, or pilocarpin (10 to 20 drops of a 1 per cent. solution). Greater success is usually obtained with sedatives, especially bromid of sodium in combination with cannabis indica, or tincture of aconite with tincture of gelsemium. In more severe cases where insomnia is a marked symptom, hypnotics are necessary. External treatment must, however, always be employed in addition to internal remedies, and one of the simplest and most effective applications is an evaporating lotion. Equal quantities of eau de Cologne and water supplied on lint, or lavender water dabbed on every few minutes, often afford great relief, especially if preceded by hot applications. Sponging with hot water, as hot as can be borne, with or without the addition of bicarbonate of soda, or a hot bath, a vapor or Turkish bath, causes dilatation of the capillaries of the skin, and a subsequent constriction of these vessels induces a more lasting cessation of itching. The addition to a hot bath of oatmeal is usually beneficial. Of cooling lotions the simplest is one containing 2 drams of liquor plumbi subacetatis to 1 ounce of lavender water and 7 ounces of distilled water. One containing hydrocyanic acid, which is very successful, is the following:

	gm. or c.c.		
Dilute hydrocyanic acid	1|5		ʒss
Spirit of rosemary	30	or	℥i
Glycerin	16		℥ss
Water to	300		℥x

Carbolic acid made up in a strength of ʒi to ℥x of water with the addition of ℥ss glycerin and ℥ss eau de Cologne gives a useful lotion, and, if necessary, to any of these lotions, ʒii of cocain may be added to give greater anti-pruritic effect. Alkaline lotions, consisting of either ʒii bicarbonate of soda, ʒii carbonate of potash, or ʒi borax to ℥viii water are all useful for cases where large areas of skin are involved. The addition of a little menthol will increase the effect. Ichthyol, ʒss, sodium bicarbonate ʒiss, spirit of lavender ℥ss, water to ℥viii, is a lotion which often gives relief and may be used for weeks without harmful effects.

In pruritus genitalium, and especially pruritus vulvæ, hygienic and dietetic rules must be adhered to. In more usual cases of pruritus vulvæ, where there is a uterine or vaginal discharge, strict cleanliness must be enjoined, with plentiful use of soap and water and douches of 1 in 5,000 potassium permanganate or 1 in 5,000 perchlorid of mercury, or 1 in 1,000 zinc sulphate. After this a vaginal tampon must be inserted and the external parts covered with Lassar's paste containing 1 per cent. silver nitrate. An ichthyol ointment or paste may be substituted or an ointment containing 30 minims of chloroform to 2 ounces of lard, or the ordinary aconitine ointment. An ointment which often gives good results is chloral hydrate, menthol and camphor āā gr. 45, lanolin and vaselin āā ℥ss.

The more inveterate cases respond well to applications of a Paquelin cautery, to excision of kraurotic skin areas, or to turning up a flap of skin all around the vulva, and division of the afferent nerve fibers. Pruritus of the anus is usually accompanied by some secondary eczema, with the formation of rhagades and thickening of the skin. Ointments are best used at night, bathed off in the morning with olive oil, and the following powder applied: chloral hydrate, camphor āā gr. 40. starch ℥i. A 20 per cent. solution of ichthyol painted on frequently gives relief. Equal quantities of lime-water and black-wash make an excellent application. In the most obstinate cases a rapid application of the actual cautery to the most irritating areas often causes great amelioration of the symptoms. Application of the high frequency current with a glass electrode is occasionally successful, and cases frequently react well to two or three ½ pastille doses of *x*-rays at intervals of a week. A more permanent cure, and one to be recommended in those intense cases when life has become a misery, is that of surgical operation.

4. **Effects of Antisyphilitic Treatment.**—Gibbs and Bayley endeavored to find out by means of the Wassermann reaction the comparative value of various antisyphilitic drugs and methods of administration in 231 cases. Of 138 cases treated with mercurial pills, 66 had received under six months' treatment, and of these 62 gave a positive reaction (94 per cent.). After this period, however, the effect of mercury is clearly shown. Of 33 cases that had received from six months to a year's treatment, 19 were positive (57 per cent.) and 14 negative. Of 25 cases that had received 18 months' treatment, 10 were positive (40 per cent.) and 15 negative. Of 16 cases of inunction treatment all were positive. Of 15 cases treated with mercurial suppositories all were positive. Of 32 cases that had received under six months' pill treatment, 30 were positive with both doses of complement (1/10 and 1/5) (94 per cent.) and 2 were positive with the smaller dose, but showed some hemolysis with the large dose (6 per cent.). Of 11 cases that had received treatment for from six months to one year, 3 were positive with both amounts of complement, 6 were positive with the smaller amount, 2 showed hemolysis with both amounts of complement—i. e., 70 per cent. showed the effect of mercurial treatment.

Of 7 cases that had received 18 months' treatment, 1 was positive with both amounts of complement, 4 were positive with the smaller, but showed some hemolysis with the larger amount. and two showed hemolysis with both amounts of complement—i. e., 86 per cent. showed the effect of treatment. In other words, of the 17 cases which had received over 6 months' treatment only 3 showed hemolysis with the smaller amount of complement, whereas 14 showed hemolysis with the larger amount of complement—i. e., 83 per cent. showed influence of treatment. All those showing a positive result with the smaller amount of complement are active syphilitics.

Of 11 cases of treatment by mercurial inunction, all under three months' treatment, 2 were positive with both amounts of complement, and 9 were positive with the smaller amount, but showed some hemolysis with the larger amount; i. e., 82 per cent. showed effect of treatment, therefore, and this after only three months. Of 17 cases that had received 12 injections of calomel 11 were positive with both amounts of complement, and 6 were positive with the smaller, but showed some hemolysis with the larger amount; 35 per cent. therefore showed effect of treatment. Of 14 cases treated with suppositories for under 6 months, only 3 (21 per cent.) showed any effect of treatment.

British Medical Journal, London

May 7

10 Practical Points in the Treatment of Clinical History of Early Syphilis. W. Coates.
11 *Surgical Treatment of Gastroptosis. F. Eve.
12 Principles of Treatment in Gastroptosis. R. Hutchison.
13 Cerebrospinal Rhinorrhea with Double Optic Atrophy. N. H. Pike.
14 Diagnostic Value of the Leucocytosis Occurring in Whooping Cough. T. A. Ashby.

15 Cellulitis of the Arm, Complicated with Pneumonia, Treated by Vaccine. W. O. Evans.
16 Acute Abdominal Infection in a Typhoid Carrier. T. H. Gardner.
17 The Knife and Its Point. A. Z. C. Cressy.

11. Surgical Treatment of Gastroptosis.—Of 11 cases of gastropexy recently operated on by Eve, 2 patients were relieved of their symptoms while in the hospital. One patient was quite well 12 months after the operation, but must be excluded because calculi were removed from the common bile duct at the same time that gastropexy was performed, and Eve believes that the symptoms were probably largely due to cholelithiasis. Another patient became melancholic shortly after the operation, was sent to an asylum, and has since been lost sight of. Of the remaining 7 cases, 6 were completely cured; 3 of them reported themselves between 1 and 4 years after operation, and 3 between 3 and 9 months after operation. The remaining patient, operated on 13 years ago, was a neurasthenic, 32 years of age. She was quite well for some time after the operation, but returned to the hospital at the end of a year owing to occasional vomiting and return of pain; but her symptoms entirely subsided while she was in the hospital, and she was able to take ordinary food. Before the operation, the iodopin reaction was obtained in three hours, and 12 months after the operation in one hour and a half, indicating that the motility of the stomach had improved.

Seven patients were treated by gastrojejunostomy. In 3 of them there was dilatation of the stomach in addition to gastroptosis, and 2 of these had also hematemesis. In three other cases hematemesis was a conspicuous symptom. Three of the patients were definitely neurasthenics, but gastrojejunostomy was performed, because in one case there was distinct dilatation and in the two other, incessant vomiting with hematemesis. Of the 7 patients 4 were cured; of these 2 reported themselves 20 months and 7 years, respectively, after the operation, and 2 patients, 8 and 3 months, respectively. The three remaining patients were slightly improved. None of the patients with hematemesis had any recurrence. In fact, Eve has not yet seen recurrence of hematemesis after gastrojejunostomy. The stoma of the gastrojejunostomy probably acts as a safety valve and prevents the distention of the stomach by flatulence, which is one of the chief causes of the hemorrhage.

The two patients treated by Duret's method were improved at first, but ultimately relapsed more or less completely. In one of them gastropexy was subsequently performed with excellent results. Eve concludes that an operation on Beyea's plan, slightly modified, is indicated in the majority of cases of gastropexy which are not amenable to medical treatment. Gastrojejunostomy should be avoided, but may be necessary in certain cases of gastroptosis with dilatation and atony, and when hematemesis is present.

Medical Press and Circular, London

April 20

18 Some Painful Surgical Conditions of the Feet. J. J. Clarke.
19 lcer. G. Herschell.
20 nt Feeding. N. P. Marsh.
21 of Gonorrhea. D. N. Cooper.

April 27

22 Abscess in the Anal and Rectal Region. J. P. L. Mummery.
23 The Difference Between Real and Ineffectual Antiseptics. J. Lucas Championniere.
24 The Place of Cesarean Section in the Treatment of Placenta Prævia. H. Jellett.
25 Phlyctenular Affections of the Eye, with Particular Reference to Pathogeny. S. Stephenson.

Clinical Journal, London

April 13

26 Fundamental Truths in Surgery. C. B. Lockwood.
27 Panhysterectomy for Carcinoma of the Body of the Uterus, in Which an Infiltrated Portion of the Bladder was Removed. A. H. N. Lewers.
28 Cancer and the Treatment of the Disease. F. M. Sanwith.

April 20

29 Endosteal Sarcoma of the Tibia. H. J. Waring.
30 *Abdominal Surgery, Including Some Rare Forms of Intestinal Obstruction. H. Curtis.
31 Some Affections of the Eye-Muscles. A. H. Thompson.

April 27

32 Treatment of Colitis. H. P. Hawkins.
33 *Abdominal Surgery, Including Rare Forms of Intestinal Obstruction (continued). H. Curtis.
34 Myomectomy During Pregnancy. F. E. Taylor.

30. Abdominal Surgery.—The cases reported by Curtis are the following: 1. Penetrating wound of a hernial protrusion (self-inflicted); intestine and mesenteric vessels transfixed; intestine and mesentery sutured; death from hemorrhage, external and internal, and shock. 2. A large umbilical protrusion simulating a reducible hernia, found to be a trabeculated sac only, containing free ascitic fluid (cirrhosis of the liver); radical cure; recovery. 3. Tubercle of the extraperitoneal tissue of the anterior abdominal wall, associated with pleurisy and adhesive peritonitis (polyorrhomenitis, or polyserositis). 4. Volvulus of the small intestine, secondary to a hernia into the duodenal-jejunal fossa; one week's intestinal obstruction; reduction; cardiac failure; death. 5. Volvulus of the cecum and strangulation of the descending colon by a traction diverticulum, secondary to chronic peritonitis, causing chronic intestinal obstruction.

Practitioner, London

April

35 The Pupil Symptoms in Thoracic Aneurism. W. Osler.
36 Four Cases of Aneurism. R. B. Ness and M. J. Stewart.
37 *Acute Pyelonephritis Due to *Bacillus Coli.* H. D. Rolleston.
38 Gastric Ulcer versus Gastrostaxis. G. A. Sutherland.
39 Prophylaxis of Breast Cancer. W. S. Handley.
40 Treatment of Aural Sepsis with Antiseptic Vapor. W. Stuart-Low.
41 Gonorrhea in the Female: Its Diagnosis and Treatment. B. Whitehouse.
42 Preparation for and After Treatment of Gynecologic Celiotomies. A. J. Wallace.
43 Fissure of the Anus. F. C. Pybus.
44 Is the Acne Bacillus the Cause of Seborrheic Conditions of the Scalp? A. D. S. Cooke and H. Dold.
45 *Persistent Chronic Bronchitis in Children. J. Allan.

37. Acute Pyelonephritis Due to Bacillus Coli.—It is important, says Rolleston, to be on the lookout for infection of the urinary tract with *Bacillus coli*, because it may give rise to grave constitutional symptoms without any prominent local manifestations; this is particularly so in children, but it may also occur in adults. The *Bacillus coli* may gain a footing in the urinary tract in three ways: 1. Ascending infection, or the upward extension of the micro-organism from the urethra to the bladder, ureters, and pelvis of the kidney. This method of infection occurs in females, especially in early life, and has been explained by the shortness of the female urethra, and by its liability to be infected from the adjacent anus by fecal discharges, and by thread worms. 2. Descending infection, or infection due to the excretion of organisms from the blood into the tubules of the kidney. 3. Transparietal infection, or the passage of micro-organisms from the colon to the kidney, probably by means of the lymphatics. Vaccines made from *Bacillus coli* isolated from the patient's urine have been largely given, but opinion is not unanimous in their favor. Surgical treatment Rolleston regards as unnecessary, except (1) in the most severe cases in which there is suppuration spreading into the kidney substance; (2) in chronic cases in which a pyonephrosis has developed; (3) in secondary cases in which there is a calculus in the kidney.

45. Chronic Bronchitis in Children.—In the treatment of persistent chronic bronchitis the first point is that the causative factor must be determined and if possible remedied. Remove enlarged tonsils and adenoids. Mouth breathing in any case is a direct menace to the child's health, and in the tuberculous will tend to aggravate the constitutional condition. Nasal obstruction from whatever cause should be at once treated. As soon as possible after the operation the child should begin to carry out respiratory exercises, to reestablish breathing through the nose. The child's dietetic régime should be carefully investigated, and in necessary cases a suitable dietary should be drawn up. The fault may lie in habitual overfeeding or in wrong feeding. All cases will be benefited by a modified diet, and in cases secondary to chronic indigestion it should be strictly enforced. In general terms the reduction of the carbohydrate intake and the interdiction of sweet things are the important factors in modifying the diet.

Allan prescribes a diet similar to that advised by Dr. Robert Hutchinson in chronic dyspepsia in children. The following should be avoided: Starchy puddings, such as rice, sago, tapioca, arrowroot, and cornflour sweets, sweet cakes, sweet fruits, jam, honey, marmalade, potatoes, turnips, carrots, etc.

The diet should consist chiefly of stale bread, dry toast with butter or drippings, eggs in any form, beef, mutton, fish, chicken, bacon, tongue, green vegetables in moderation, custard, plain puddings, stewed prunes, figs, etc. The child should be trained to eat only at meal times and should not be given anything between meals. Tea, coffee and stimulants should be prohibited. In the absence of definite gastric symptoms, Allan relaxes the restrictions somewhat, allowing more carbohydrate food, and a little weak tea, but forbidding sweet things as far as possible. General hygienic measures are of primary importance. These children should be in the open air as much as possible. The rooms which they inhabit should have good ventilation, and the window in the sleeping apartment should be kept open night and day. The clothing should be of such material as to afford sufficient warmth without being too heavy. Outdoor sports, in the absence of any cardiac disability, are to be recommended. Cold sponging is invaluable. A change of residence is often beneficial. With regard to medicinal treatment, general tonics should be prescribed. The cough under certain circumstances may call for treatment, but it is often found that under this general tonic treatment, improvement as regards this symptom takes place.

Journal of Laryngology, Rhinology and Otology, London

April

46 Report (1908) of the Ear and Throat Department of the Eye, Ear and Throat Infirmary, Edinburgh. W. G. Porter and J. M. Darling.
47 Acquired Deaf-Mutism Due to Congenital Syphilis. M. Yearsley.

Annales de Gynécologie et d'Obstétrique, Paris

April, XXXVII, No. 4, pp. 193-256

48 Operative Treatment of Postoperative Abdominal Hernia. (Nouveau procédé d'opération de la hernie abdominale postopératoire.) V. Pitha.
49 Supravaginal Hysterectomy near Term without Emptying the Uterus. A. Couvelaire.
50 Clinical Study of 183 Cases of Hemorrhage from Placenta Prævia. (Doit-on recourir à l'opération césarienne pour traiter les hemorragies dues à l'insertion vicieuse du placenta?) J. Mouchotte.

Annales de l'Institut Pasteur, Paris

March, XXIV, No. 3, pp. 161-240

51 The Microbe of Peripneumonia of Cattle. (Morphologie du microbe de la péripneumonie des bovidés.) J. Bordet. (Microbe de la péripneumonie.) Borrel, D. Beaumetz, Jeantet and Jouan.
52 Diastase Splitting Cellulose. (Recherches sur la Cellase.) G. Bertrand and M. Holderer.
53 Action of Certain Microbes on Tuberculin. (Etude de la nature de la tuberculine). Vaudremer.
54 Analyzing Action by Certain Acids on Alcoholic Fermentation. M. [illegible] and M. Rozenband.
55 Prese[illegible] Leptomonas in the Juice of Three Spe[illegible] Milkweed): "Flagellosis" in Plants. A. Lafont.
56 Treatment of Trypanosomiasis in Horses. (Traitement des trypanosomiases chez les chevaux par l'orpiment seul ou associé à l'émétique de potasse.) A. Thiroux and L. Teppaz.
57 Treatment of Surra in Camels. (Traitement du surra chez les dromadaires par l'orpiment seul ou associé à l'émétique ou à l'atoxyl.) A. Thiroux and L. Teppaz.

Archives des Maladies du Cœur, Etc., Paris

April, III, No. 4, pp. 209-272

58 Paroxysmal Adams-Stokes Syndrome with Sclerosis of Bundle of His. (Syndrome de Stokes-Adams à crises paroxystiques avec rythme bicouplé dans un cas de double lésion aortique compliquée de double lésion mitrale et de rétrécissement tricuspidien. Sclérose du faisceau de His.) E. Barié and M. Cléret.
59 Sclerosis and Atheroma of Pulmonary Artery: Mechanical Factors. Giroux.
60 Comparative Research on Hemolytic Jaundice in New-Born Infants and Induced Hemolysis. (Etude anatomo-pathologique comparée de l'ictère hémolytique du nouveau-né et [illegible] Nature hémolytique de l'ictère [illegible] Leuret.

Bulletin de l'Académie de Médecine, Paris

April 26, LXXIV, No. 16, 357-368

61 *Compulsory Isolation in Leprosy, Smallpox, etc. (A propos d'un cas de lèpre contagieuse. Réflexions sur l'isolement obligatoire de certains malades infectieux.) J. Courmont, M. Lannois and Dufourt.

61. **Contagious Leprosy.**—Courmont has a patient with leprosy whose nasal secretions swarm with lepra bacilli. The man ascribes the infection to cleaning a building in Colombia, South America, which had been used at one time for lepers but was then empty. A few months later symptoms of leprosy developed. He has been serving as a porter during the last two years in France, and Courmont discusses the problem of social hygiene presented by such a case, as there is no legal means of preventing his spreading the infection broadcast. The nose was the principal seat of the ulcerations. The throat also was involved. As the man is only 39, lives a wandering life and emits every day several grams of secretions swarming with bacilli, and is liable to acute exacerbations at certain intervals, he is certainly a peril to the public. Courmont believes the passage of some wandering leper of this kind may have been the origin of certain foci of leprosy in France. He urges modification of the law to enforce compulsory isolation of contagious individuals until their bacteriologic recovery. In the Scandinavian countries, he says, both rich and poor seek the hospitals, and this is the true solution of the question. He states that it is, from the social point of view, more important to isolate the contagious than the insane. Prophylaxis of scarlet fever, diphtheria, leprosy and smallpox requires compulsory isolation from the beginning of the disease to the end of the contagious period.

Obstétrique, Paris

April, III, N. S., No. 4, pp. 289-384

62 Unusually Large Fetuses. (Considérations sur les gros fœtus.) P. Delmas and J. Delmas.
63 Pubiotomy in Five Cases. (A propos de cinq cas d'hébotomie.) E. Holländer.
64 Muscle and Ligament Apparatus of the Cervix. L. Devraigne and P. Descor[illegible] No. 3.
65 The Need and [illegible] in Infants. (Le besoin d'énergie chez [illegible] blière.

Presse Médicale, Paris

April 27, XVIII, No. 34, pp. 313-320

66 Amputations in Light of Modern Progress. (Les amputations.) H. Hartmann.

April 30, No. 35, pp. 321-328

67 Staphylococcus Infection of the Bladder Following Carbuncle on the Neck. (Infection vésicale staphylococcique par migration de dehors en dedans.) T. Tuffier and A. Mauté.
68 *Behavior of Leucocytes with Cancer Extract: Leucodiagnosis. (Nouveau procédé de diagnostic du cancer.) H. Bénard and C. Gagneux.
69 Epigastric Hernia. C. Dujarier and J. Berger.

May 4, No. 36, pp. 329-336

70 *Toxicity of Echinococcus Cysts. Direct Toxicity and Anaphylaxis. L. Boidin and G. Laroche.

68. **Leucodiagnosis of Cancer.**—Achard, Bénard and Gagneux have demonstrated that the presence of certain cellular elements in the organism confers on the leucocytes the faculty of reacting to the products of these cells. This reaction is influenced by the normal or pathologic modifications occurring in the functioning of these cells. Their tests *in vitro* seem to show that this leucocyte reaction is specific to the pathogenic or normal substance circulating in the organism, thus revealing the physiologic or pathologic state connected with the intoxication, infection or functional disturbances in the organ in question. They have applied this method to various infections and diseases and in this article report the findings in 49 cases of cancer, all positive, and in 24 non-malignant cases, in which the reaction was always negative. The test is made with extract of macerated cancer tissue. Mixed with this extract the leucocytes from healthy persons seem to lose their phagocytic property, while leucocytes from persons with cancer are not affected by the extract. The phagocytic properties are tested with one drop of a yeast emulsion in test tubes containing the extract and a drop of blood from the patient.

70. **Toxicity of Echinococcus Disease.**—Boidin and Laroche call attention to the fact that the fluid from an echinococcus cyst is scarcely at all toxic for animals, and yet the absorption of a few drops during a clinical operation is liable to cause sudden and severe symptoms indicating serious intoxication. Chauffard explains this as the result of anaphylaxis, and experimental research is here reported which justifies this view. There is evidently a slow, chronic, toxic action going on all the time, as is revealed by biologic tests, fixation of complement and eosinophilia. Under the influence of this chronic intoxication the patient becomes sensitized, as it were, and the introduction of a new dose of the toxin, even a small one, is liable to induce shock due to anaphylaxis.

Revue de Gynécologie, Paris

April, XIV, No. 4, pp. 305-416

71 *Microcystic Ovary. (L'ovaire à petits cystes.) E. Forgue and G. Massabuau. Commenced in No. 2.
72 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 2.

71, 72. See abstracts 68 and 69, page 1484, April 30, 1910.

Semaine Médicale, Paris

May 4, XXX, No. 18, pp. 205-216

73 Scleroderma with Simple Goiter. M. Klippel.

Archiv für Gynækologie, Berlin

XC, No. 3, pp. 441-658. Last Indexed April 23, p. 1414

74 Fat Droplets in the Muscle Cells in Chronic Metritis. (Auftreten von Fetttröpfchen in den Muskelzellen des Myometriums bei der sogenannten Metritis chronica.) F. Unterberger.
75 Respiratory Metabolism and Respiration During Pregnancy. (Respiratorischer Stoffwechsel und Athmung während der Gravidität.) L. Zuntz.
76 Comparative Research on Intraperitoneal and Extraperitoneal Infection. M. Schwab.
77 Experiences with 530 Cases of Contracted Pelvis at Zurich Maternity. (Geburtsverlauf und Therapie beim engen Becken, 1891-1909.) O. Metzler.
78 Etiologic Importance [illegible] ncy Kidney and Eclampsia. [illegible] r weissen Blutkörperchen fi [illegible] und die Eklampsie.) A. Dienst.
79 Thirty-four Cases of Eclampsia at Urban Maternity. W. Schneider.
80 Colporrhaphy by Doubling the Vaginal Wall. (Kolporrhaphie durch [illegible]) A. Rieck.
81 Relations [illegible] Cerebri. (Beziehungen [illegible] ysis.) E. Mayer.
82 *Operative Treatment of Placenta Prævia. M. Henkel.

82. **Operative Treatment of Placenta Prævia.**—Henkel compares the experiences at various clinics with different technics. His conclusion is to the effect that abdominal Cesarean section is indicated for placenta prævia centralis whether the fetus at term is living or not. Earlier in the pregnancy the vaginal route is preferable, clamping the uterine vessels on both sides. With placenta prævia lateralis or marginalis either the inflatable bag or version can be applied. In a recent series of 26 cases of placenta prævia in which treatment was applied on these principles, only 2 of the patients died, while 6 patients and half of the children died in a preceding series of 30 cases in which the metreurynter had been exclusively used.

Beiträge zur Klinik der Tuberkulose, Würzburg

XVI, No. 2, pp. 71-182. Last indexed May 14, p. 1656

83 Tuberculin in Treatment of Tuberculosis. (Einige Bemerkungen über die specifische Therapie der Tuberkulose.) K. Dluski.
84 Béraneck's Tuberculin in Treatment of Tuberculosis. (Anwendung des Beraneckschen Tuberkulins TB in der Tuberkulose.) K. Dluski.
85 Study of Symm [illegible] 'ur Kenntnis der symmetrisch [illegible] L. v. Muralt.
86 Spengler's I. K. [illegible] K. Weihrauch.
87 Carbol-Fuchsin [illegible] True Acid-Fast Bacteria. (Neue einfache Strukturfärbung für die echten Säurefesten, speziell für die Tuberkuloseerreger.) H. Kronberger.
88 Pathologic Anatomy of Artificially Induced Pneumothorax, Warnecke.

Beiträge zur klinischen Chirurgie, Tübingen

April, LXVI, No. 3, pp. 463-801

89 *Fatality Following Momburg's Belt Constriction. (Ein Todesfall im Anschluss an Momburg'sche Blutleere.) J. Amberger.
90 Cystic Tumors in Tendons. (Ueber Sehnenganglien.) W. Bergemann.
91 Traumatic Hernias. F. Schlender.
92 Hernia into the Lesser Sac of the Omentum. (Die Hernien der Bursa omentalis mit abnormen Eintrittspforten. Die Transhæsio intestini.) E. D. Schumacher.
93 *Injuries of the Semilunar Fibrocartilage of the Knee. (Verletzungen der Kniegelenkszwischenknorpel und ihrer Verbindungen.) F. Kroiss.

89. **Fatality After Momburg Belt Constriction.**—The patient in the case reported was an aged and infirm man who had been crushed between a wagon and a stone wall, the contusion being in the right inguinal region. Two hours after the accident signs of laceration of the femoral artery compelled operation and the rubber tubing was wound around the waist to prevent further hemorrhage, according to the Momburg technic. As the tubing was unwound afterward the patient collapsed. Autopsy disclosed stasis hemorrhages in the pleura and edema in the lungs and a little bloody fluid in the pericardium. These evidences of severe congestion in the upper part of the body Amberger ascribes to the action of the constricting tubing in this particularly decrepit patient.

93. **Injuries of the Meniscus and Their Treatment.**—Kroiss reports from the Innsbruck clinic in charge of Schloffer 32 cases of this kind and reviews 214 from the literature, giving a summary of each, with the special treatment and the ultimate outcome so far as known. Removal of the meniscus gave good results in 82 per cent. of the cases, while a perfect result was obtained in 92 per cent. of the cases in which the meniscus was merely sutured.

Berliner klinische Wochenschrift

April 18, XLVII, No. 16, pp. 709-756

94 Prophylaxis and Treatment of Caisson-Disease. (Pressluftererkrankungen.) J. Plesch.
95 Radium Emanations and Gout. H. Bechhold and J. Ziegler.
96 Aortic Insufficiency and the Wassermann Reaction. R. Krefting.
97 *Prelatent Stage of Pulmonary Tuberculosis: Tuberculosoid. (Ueber Lungentuberkulosoid.) E. Neisser and H. Bräuning.
98 *Loading Tests of the Stomach. (Belastungsproben des Magens.) W. Bloch.
99 Functions of th [illegible] 'ion of Experimental Injection of Its [illegible] Commenced in No. 15.
100 Relations Betwe [illegible] 'yelitis. E. Rosenkranz.
101 Suction Apparatus for Keeping Field of Operation Clear of Blood During Operations on the Skull. (Versuche über Blutstillung bei Gehirnoperationen.) E. Unger and M. Bettmann.
102 Advantages of Vein or Artery Wall for Plastic Operation on the Dura. (Duraplastik.) E. Unger and M. Bettmann.
103 Application of Electri [illegible] —for Operative Purposes. [illegible] elektrischen Schwingungen [illegible] Cohn.
105 "Enlarged Suicide:" ([illegible] lren.) (Der Familienmord un [illegible] H. Marx.

97. **Pulmonary Tuberculosoid.**—Neisser and Bräuning have coined this term to express a common condition in which the patients present subjective signs of pulmonary tuberculosis and some susceptibility to tuberculin, unstable temperature but no fever, and tenderness in the region of the bronchial glands, but all these signs gradually subside and the patients remain constantly well. In the 1,900 persons who have passed through the tuberculosis observation station at Breslau in the last ten years, 300 presented this tuberculosoid condition, and examination from 4 to 10 years later has shown that the condition is the result of tuberculous infection in a person who is not predisposed to the disease and is thus able to resist general infection. The process remains small and circumscribed, and either heals or passes into a latent phase. If he dies from some intercurrent disease, the findings are those which Naegeli has described. This prelatent stage of pulmonary tuberculosis may itself become chronic, the patients being then classed as anemic or pseudoanemic by their ailing but never really sick state, but their susceptibility to tuberculin and the tenderness of the bronchial glands reveal that they are chronic tuberculosoids. The primary focus is not able to induce actual pulmonary tuberculosis but still keeps its foothold. The importance of this conception is that in these cases the patients did not take any treatment or merely a very insignificant one. If they had been given a course of treatment the recovery or passage into the latent phase would have been ascribed to the treatment. In the spontaneously recovering cases the observer might have been tempted to doubt his diagnosis of tuberculosis. Among 90 tuberculosoids reexamined after several years, 57 were cured or in a latent phase, and in 28 the condition had become chronic although better than at the first examination. Only 2 out of the total 300 tuberculosoids have died, and both succumbed to an intercurrent affection. In conclusion Neisser and Bräuning call attention to the peculiar liability of certain occupations to develop this tuberculosoid condition; it was encountered in 38 per cent. of 269 cabinet makers and locksmiths; in 32 per cent. of 68 painters and printers; in 70 per cent. of 47 girls employed in stores, but only in 3.7 per cent. of 325 housemaids and in 2 per cent. of 179 sailors, gardeners or roofers, or men otherwise employed out of doors.

98. **Loading Test of the Stomach.**—Bloch has the patient take a suspension of bismuth and he is then radiographed. He then eats an appetizing meal of beefsteak and potatoes, eating as much and as fast as he can, and is then radiographed anew at intervals. The normal stomach under these conditions

enlarges evenly, spreading wider, but the pathologic stomach is dragged down by the weight of the ingesta and the latter accumulate at the bottom, which is the only part that spreads out wide.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

April 4, XIII, No. 5, pp. 161-208

106 *Leukemic and Pseudoleukemic Disease of the Upper Air Passages. (Die leukämische und pseudoleukämische Erkrankung der oberen Luftwege.) R. Imhofer. Commenced in No. 3.
107 *Traumatic Pneumonia. L. Müller. Commenced in No. 3.

106. **Disturbances in the Upper Air Passages with Leukemia and Pseudoleukemia.**—Imhofer discusses the manifestations in the throat and nose of a tendency to leukemia and pseudoleukemia. With leukemia the mouth and throat may present a diffuse catarrhal affection, or the lymphatic tissue, follicles and tonsils may alone be involved, or the lesions may be of an ulcerative or gangrenous nature. In differentiation great stress should be laid on a striking and rapidly increasing enlargement of the tonsils—they may become four or five times the normal size; small suggillations are also characteristic. When such are discovered the blood should always be examined under the microscope. Hanszel has reported a case of acute leukemia in which a deep ulcer developed in the tonsil, involving the uvula, and staphylococci were cultivated from the lesion. The connection with an angina is particularly evident in a case reported by Hanszel in which a young man had a severe sore throat, followed by fatigue and emaciation after a fall from a horse. Four weeks later the angina recurred with ulceration in the tonsil, enlargement of the glands throughout and death in four weeks from acute leukemia. Kubler found a yellowish deposit on gums and tonsils in a previously healthy soldier, and their leukemic nature is evident, as a tendency to hemorrhages at various points and multiple glandular tumors were also observed. In 4 cases on record operations for removal of adenoid vegetations or enlarged tonsils in leukemic children proved fatal. In one case the child died suddenly several hours after an extensive postoperative hemorrhage. In the other cases 2, 3 or 4 weeks elapsed after the operation before the child succumbed to increasing weakness and aggravation of the signs of leukemia, suggesting that the operation had transformed a chronic leukemic process into an acute form. The danger of hemorrhage is thus not the main peril in operations on the upper air passages in leukemia; the possibility of rousing a mild chronic process to severe acute manifestations must be considered. In one of the above cases this transformation did not occur until after a second operation for recurrence of the leukemic enlarged tonsils and adenoid growths. Consultation with the little patient's family physician is extremely important, if practicable, before attempting any operation on adenoids or enlarged tonsils. On the slightest suspicion of leukemia the most careful examination should be made, and only when leukemia can be certainly excluded should the operation be performed except for vital indications. Especially suspicious is the simultaneous enlargement of all the tonsils and of the regional glands, although such may be encountered with tuberculosis. Rapid recurrence after operation is also suspicious of leukemia; also when the swollen parts are redder than with tuberculous lesions and the tumor seems harder; edema is not observed as in tuberculous lesions in the throat. The blood findings are the main reliance for differentiation. Lymphosarcoma is distinguished by its progressive encroachments in the vicinity. Treatment of leukemic affections of the nose and throat can be only symptomatic and that for leukemia in general and this has little to show to its credit. Tracheotomy is indicated as a last resort but did not avert the fatality in the cases on record. In one there was necrosis of the fascia and fatal bronchopneumonia; pressure necrosis and gangrenous destruction are liable also after intubation. The same conclusions apply to pseudoleukemia and to lymphosarcoma except that the course of the latter is more prolonged as a rule, and patients with lymphosarcoma stand operations much better than those with leukemia or Hodgkin's disease. Beale, Storck and others have reported long survivals after removal of the lymphosarcoma and Abercrombie performed three operations for recurrence, the patient finally succumbing to a complicating erysipelas. Lymphoid and myeloid chloromas seem to stand midway between leukemia and lymphosarcoma, but they do not involve adjoining tissues and there is no enlargement of the spleen.

107. **Traumatic Pneumonia.**—Müller reviews 127 articles that have been published on the subject of pneumonia following external violence or inhalation of dust or gas or aspiration of a foreign body. He summarizes the various cases reported, emphasizing the special features of each. The list includes 21 articles published since 1900, among them J. J. King's article in The Journal, March 21, 1908, page 939. Litten reported 4.4 per cent. of traumatic cases in 320 cases of pneumonia in his experience during 6 years. The acute pneumonia may develop into a chronic phase, but Müller could find very few records of traumatic pneumonia commencing in an insidious chronic form. Hadlich's experimental research has shown that a chronic florid inflammatory process may persist in the lung unsuspected long after the healing of an experimental stab wound not far away. In the few clinical cases of chronic traumatic pneumonia on record a tuberculous element seems probable in some. Partsch states that the numerous small foci of extravasated blood from a contusion of the lung may induce a syndrome suggesting insidious phthisis but that complete recovery is the rule. Stern is convinced that chronic non-tuberculous inflammation of the lung occurs more frequently than is generally recognized. In a case in which pneumonia developed two days after a boy had been hit on the back by his teacher, the court refused to admit that the blows on the back, the head bent forward, could have been responsible for the rapid development of acute pneumonia. In Weigel's case, also, no forensic connection was admitted between a slight injury of the head in 1893 and a fatal pneumonia complicated with meningitis in 1906. In another forensic case a young man developed fatal pneumonia two days after a jar from another swimmer in a swimming tank. He became unconscious from the impact but was rescued in about four minutes. The verdict of traumatic pneumonia relieved the swimming-master of responsibility; the autopsy findings showed that no water had been aspirated.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 20, XL, No. 12, pp. 353-400

108 *Treatment of Contracture in Hemophilics. (Zur Behandlung des kontrakten Blutergelenkes.) C. Hübscher.
109 *Traumatic Tabes. P. Ladame.
110 *Predisposition to Disease with Atmospheric and Similar Conditions. (Disposition und Gezeitenamplitude.) H. Brunner.

May 1, No. 13, pp. 401-432

111 Appendicitis and Gynecologic Disease. (Appendicitis und Frauenkrankheiten.) A. Widmer.
112 A Century of Vital Statistics in a Swiss Commune. (Hundert Jahre Geburts- und Totenstatistik der Kirchgemeinde Ermatingen.) O. Nægeli.

108. **Treatment of Contractures in Hemophilics.**—Hübscher describes the technic with which he was able to correct the contractures in the knees of a boy of 15, a typical bleeder, from a family of bleeders. The process in the knees was the typical hemophilic joint process, and there was a fistula in the arm from a hematoma in the biceps, which bled a little at times. Before attempting treatment, Hübscher injected 10 c.c. of normal horse serum into the region of the pectoralis, and within two days the fistula ceased to bleed. The contracture was corrected with a plaster cast from hip to toes, cut out at the knee, with elastic traction on the leg by means of rubber tubing fastened to a projecting iron frame. The device is illustrated. The boy was not kept in bed and by the end of the month he was able to use his legs. The last trace of contracture was then reduced under ether after another injection of horse serum; there was no bleeding at any time. The family physician was instructed to keep up the prophylactic injections of serum every six weeks or two months afterward for a time. The influence of the serum was striking in this case; under its protection measures were successfully undertaken even the attempt at which previously had brought on menacing hemorrhages. He used the serum less than two hours after it had been taken from the horse. By this means he believes that it will be possible to avoid fatalities such as those König has reported in which boys of 13 and 18 succumbed to hemorrhage after an operation on the knee for supposed tuberculosis. A cousin of Hübscher's patient met

with this same fate. Tilmann also lost a patient from this cause after an operation on a hemophilic joint which had been mistaken for a lipoma. Fröhlich mentions the case of a soldier who was operated on for a supposed abscess in the hip joint, the fifth process of the kind, each time the fever and hard edema suggesting an acute osteomyelitic process. The patient bled to death thirty-six hours after the operation. When a process of this kind, generally bilateral and recurring at intervals, develops in a youth of a pale aspect, and especially if Roentgen-ray examination shows the unmistakable contracted bleeder joint, no operation should be attempted if avoidable; but if required, the patient should be kept under the prophylactic influence of injections of normal horse or human serum. In dubious cases, he remarks, it is much safer to make the injections sometimes when they are not needed rather than to omit them in the true bleeder cases.

109. **Traumatic Tabes.**—Ladame's patient was a previously healthy man of 52 who developed symptoms of incomplete tabes a few months after a severe railroad accident followed by a traumatic neurosis, the symptoms of which persisted for years with varying intensity. Although everything in this case seemed to speak for traumatic tabes and there was nothing to suggest syphilis in the family history, yet Ladame is inclined to believe that an ignored syphilis was at the root of the nervous affection, as the patient had had a brief mild gonorrhea in youth. No tests were made for the Wassermann reaction; the Argyll-Robertson sign was pronounced.

110. **Tides and Predisposition to Disease.**—Brunner has been keeping records for thirty years in regard to the incidence of disease in connection with the reduction in the atmospheric pressure which accompanies the periods during which the attraction of the moon is supplemented by that of the sun increasing the effect of gravitation. This tide in atmospheric pressure is manifested by the changes in the weather and possibly also by changes in the circulation of the sap in plants, the vitality of pathogenic germs and the blood pressure in man. The maximal effect is therefore experienced when the moon is nearest the earth, and especially at the time of the great spring tides. He gives a table of the date of onset of the first symptoms of pneumonia in all cases of pneumonia in his charge during the last 2 years, a total of 25 cases. In 6 cases the onset was within 2 or 3 days of each other in different villages, and in 21 it coincided with the new or full moon, only 4 occurring at the first or last quarter of the moon. He thinks that the influence of the maximal effect of the attraction of the moon is evident also in the commencement of labor, the incidence of epileptic seizures, crises in disease and death.

Deutsche medizinische Wochenschrift, Berlin

April 28, XXXVI, No. 17, pp. 785-824

113 *Banti's Disease. (Zur Bantischen Krankheit.) Momm.
114 *Non-Parasitic Chyluria. J. Hnatek.
115 *Pus Flooding Gastrointestinal Tract from Emphysema in the Nasal Sin[illegible] Magendarmkanals aus [illegible] iner Bemerkung über di[illegible] im Magen.) E. Zabel.
116 Fo[illegible] Calories in Infant Feeding. (Die einfache Grundlage der kalorische [illegible]uglinge.) G. Heimann.

113. **Banti's Disease.**—Momm reports a typical case, the history showing some connection with an accident, the patient having been run over by a bicycle. Apparently complete recovery followed removal of the spleen four years after the first symptoms, and the patient feels entirely well at present, six months after the operation. The case shows that ascites may occur quite early in the disease; it is probably the result of abnormal composition of the blood and obstruction of the lymphatics in consequence of swelling of the mesenteric and retroperitoneal glands.

114. **Non-parasitic Chyluria.**—In Hnatek's case, a previously healthy woman of 33 suddenly noticed milky discoloration of the urine and the passage of villus-like clots, with pains similar to stone colic. The night urine contains 7.73 c.c. albumin to the liter; the day urine is normal unless the patient reclines, when it becomes chylous. Catheterization of the ureters shows that the left kidney eliminates four times as much fat as the right, suggesting new problems, as the amount of urine is about the same from each.

115. **Gastrointestinal Disturbances from Swallowing Pus from Sinusitis.**—Zabel has encountered a number of cases of subjective gastric disturbances for which a sinusitis was responsible. The disagreeable sensations were most marked in the morning. Bad taste in the mouth, gases in the stomach, lack of appetite and loss in weight, and altered stomach content is suggestive of chronic catarrh. His experience warns that in all cases of gastric disturbance it is wise to seek for the presence of pus in the nasal apparatus or throat, in the teeth or from a cavity in the lungs. He found flagellates numerous in the stomach content in 2 cases described in detail; the patients were boys of 9 and 15 and the microscope showed numerous scraps of mucosa in the stomach content swarming with the parasites, and with traces of punctate hemorrhages. The disturbances in the intestines from this cause may be so serious as to suggest appendectomy.

Deutsche Zeitschrift für Chirurgie, Leipsic

March, CIV, Nos. 3-4, pp. 209-423

117 *Functional Results of Resection of the Elbow with Interposition of a Muscle-Flap According to Helferich. H. Reiner.
118 Case of Ligation of the Innominate Artery for Arteriovenous Aneurism of Common Carotid. P. Herzen.
119 Firearm Wound of Heart without Perforation of the Pericardium. (Fall von Perforation des Herzens durch [illegible] Durchschlagung des Herzbeutels, [illegible] zur Kasuistik der Verletzungen des [illegible]) I. Luxembourg.
120 [illegible] and Cytologic Research on Tumors [illegible] Cortex. (Tumoren vom Typus der Nebennierenrinde.) C. Ciaccio.
121 *Influence of Balsam of Peru on Bacteria and its Therapeutic Value in Treatment of Wounds. J. Sickmann.
122 Etiology of Pol[illegible]
123 Canceroid in Ex[illegible]
124 Production and [illegible] Air in Hospitals. (Der [illegible]) F. Kuhn.
125 Production of [illegible] steril vom Schlachttier [illegible] behandelt.) F. Kuhn.
126 *Removal of Bladder for Carcinoma. (Zur totalen Blasenexstirpation bei Carcinom.) N. N. Petrow.
127 Technic for After-Treatment of Suture of the Patella. (Patellarnaht.) E. W. Baum.
128 [illegible] Nerve During Operations for Goiter. [illegible] L. Dumont.
129 *[illegible] L. Schneider.
130 [illegible] F. Weber.

117. **Resection of Elbow with Interposition of Muscle Flap.**—Reiner reviews the outcome in 23 cases of injury or disease of the elbow requiring resection and treated by interposition of a flap of muscle tissue. The arm was left fairly movable in 82.6 per cent. of the cases. The results were invariably good in the tuberculous cases, the local process healing, and in all the results far surpassed those attainable with other technics, he is convinced.

121. **Balsam of Peru in Treatment of Wounds.**—Sickmann's experience with balsam of Peru and his experimental studies have confirmed, he says, the great advantages of this method of treating recent accidental wounds. The wound is covered with a compress while the vicinity is scrubbed, shaved or washed with alcohol and benzine and painted with tincture of iodin. Then the compress is removed, the minor bleeding arrested, the superficial wound secretions mopped up and, without any further preparation or sterilization, the balsam is poured into the wound until it overflows, after which a dry sterile dressing is applied. The balsam is so heavy that it sinks down into the remotest crevices. The dressing is not changed for a week unless fever or other signs of infection develop. This is by no means an ideal method of treatment, he remarks, but the results are remarkably good in comparison with the simplicity of the method. Especially for the first dressing of the wound, which generally decides the fate of the lesion and possibly of the patient, this technic renders inestimable service. It is also extremely useful in old torpid processes to stimulate them to more active repair. He often uses the balsam, instead of tamponing, to fill up and thus close the holes left by drains in operations on the joints. No inconveniences were ever observed from the use of the balsam; it seems to have a slow but unmistakable antiseptic action on the germs commonly encountered in recent wounds, while its physical and chemical properties oppose putrefaction. It has, further, a positive chemotactic action which enhances the local resistance.

126. **Removal of Bladder for Carcinoma.**—Petrow reports a case in which the patient was in good condition 9 months after total removal of the bladder for malignant disease. In a second case the disease was far advanced and the heart dilated, and the patient succumbed during the preliminary operation. He reviews 64 cases he has found in the literature, the immediate mortality having been 50 per cent., 11 others succumbing in from 2 to 5 years, while 13 others are still living from a month to 16 years since the operation. The ureters were implanted in the intestine in 11 cases, including 6 in which the patients are still living after from 4 to 18 months, while the survival was from 3 months to over 5 years in the 5 other cases. In the 3 cases in which the ureters were implanted in the vagina, the patients are still living after 3 months, 8 months and 16 years. In 9 cases the ureters were implanted in the skin in the lumbar region front or back, and 5 of the patients died in from 2 to 13 months; the others are still living after 4 months in 1 case and 2 years in the 3 others. The communication issues from Oppel's surgical service at St. Petersburg. Petrow advocates operating on the ureters first, not removing the bladder until two weeks after they have been implanted at the desired point. He recommends the intestine for this. The laparotomy for the purpose allows oversight of conditions before the final operation. The outcome depends on the state of the kidneys, as a rule; if they are diseased, as in his second case, there is not much hope of a successful termination.

129. **Effectual Parathyroid Treatment of Parathyreopriva Tetany.**—The thyroid gland was the seat of a sarcoma in the case reported by Schneider. The cancer involved also the parathyroids, and removal of the growth was followed by severe tetany. Fresh parathyroid substance from the horse, dried and powdered, was given, and he says that a specific favorable effect on the tetany was unmistakable. The patient was a woman of 40; she succumbed before the year was out to the progress of her malignant disease.

Fortschritte der Medizin, Leipsic

April 7, XXVIII, No. 14, pp. 417-448

131 Present Status of Differential Diagnosis of Syphilitic and Metasyphilitic Brain Disease. (Heutiger Stand der Diagnostik und Differentialdiagnostik der luetischen und metaluetischen Gehirnerkrankungen.) A. Fauser. Concluded in No. 16.

132 Treatment of Chancroid and its Complications. (Behandlung des Ulcus molle.) G. Hahn.

April 14, No. 15, pp. 449-480

133 Opsonin and Vaccine Therapy. H. Reiter.

April 21, No. 16, pp. 481-512

134 Psychic Hermaphroditism in Daily Life and Especially as a Basis of Neuroses. (Zur Dynamik und Therapie der Neurosen.) A. Adler.

Medizinische Klinik, Berlin

May 1, VI, No. 18, pp. 691-730

135 *Artificial Dilatation of Cervix Uteri. (Uber Methoden zur künstlichen [illegible] r unter der Geburt und zum [illegible] W. Hannes.

136 Nature of J[illegible] the Metabolism. (Wesen de[illegible] Einfluss auf den Stoffwechsel.) O. Gross.

137 Lordotic Albuminuria. R. Fischl.

138 Corset for Correction of Lordotic Albuminuria. T. Wohrizek.

139 *Thyroid Treatment in Epilepsy. (Schilddrüse und Epilepsie.) A. Siegmund.

140 *Resistances in the Circulatory System and their Importance in General Practice. (Ueber Widerstände im Zirkulationssystem und ihre Rolle in der Praxis.) L. Sperling.

141 Symptomatology of Senile Polyneuritis. S. Auerbach.

142 Roentgen-Ray Examination of the Heart in Carbonated Bath. (Röntgenuntersuchungen des Herzens im Kohlensäurebad.) A. Selig.

143 Altitude and Forest Climate. (Ueber Höhenklima und Waldklima.) J. Schubert.

135. **Artificial Dilatation of the Uterine Cervix.**—Hannes protests against instrumental dilatation, as it merely stretches the tissues without inducing physiologic dilatation; the latter can be realized with the elastic inflatable bag. This simulates the natural process of stimulation of the cervical musculature to rhythmic contraction by the gentle, gradual pressure of the ovum from above on the cervix. If it is impossible to wait for this natural process, he advises slitting the cervix—vaginal Cesarean section. The incision is under control, which is never the case with the tears resulting from instrumental dilatation

139. **Epilepsy and the Thyroid.**—In the case reported by Siegmund, certain evidences of thyroid insufficiency accompanying the epilepsy suggested possible benefit from thyroid treatment which was systematically applied. The patient was a girl, 9 years old, and the constant improvement has confirmed the assumption that defective thyroid functioning was an important factor in the epilepsy. The child has been under observation for two years.

140. **Obstacles to Normal Circulation and their Importance in Pathogenesis.**—Sperling comments on the interference with the circulation that may be entailed by distention of the stomach or intestines and weakening of the heart action and nerve force from chronic overexertion. In a case described a girl nearly 10 years old had attacks of nervous symptoms, including tonic-clonic spasms, which various courses of treatment by eminent neurologists failed to relieve. Sperling differentiated the trouble as the result of interference with the circulation from overdistention of the gastrointestinal tract. During the intervals between the attacks the skin was pale, the extremities cold, the pulse rapid and the abdomen prominent. The stomach and intestine were distended to two or three times the normal size and this interfered so much with the circulation in the trunk that a reflex nervous syndrome had developed. His assumption as to the nature of the trouble was confirmed by the complete recovery from the nervous troubles as soon as conditions in the gastrointestinal tract had been restored to normal.

Münchener medizinische Wochenschrift

April 26, LVII, No. 17, pp. 889-944

144 Principles for Treatment of Cancer. (Die im Samariterhause Heidelberg geübten Methoden der Krebsbehandlung.) V. Czerny.

145 *Fulguration in Gynecology. (Was leistet die Fulguration im Dienste der Gynäkologie?) A. Richter.

146 *Ca[illegible] Behandlung des [illegible] und ihre Aus-[illegible]) M. Tiegel.

147 *Early Diagnosis of Multiple Sclerosis. (Zur Frühdiagnose der multiplen Sklerose—[illegible]

148 Increased Reaction in [illegible] Injections. (Ueber [illegible] Tiere gegen subkutan[illegible] F. Schenk.

149 Influence of Mercury [illegible] Reaction. (In welcher Weise wirkt [illegible] antiluetischen Behandlung auf den [illegible] A. Brauer.

150 Treatment of Tuberculo[illegible] (Altes und Neues zur Behandlung der tuberkulösen Hämoptoe.) A. Heisler and E. Tomor.

145. **Fulguration in Treatment of Uterine Cancer.**—Richter reports the experiences with various measures in 45 cases at the gynecologic clinic at Dresden in charge of Leopold. Fulguration was systematically applied in all and the palliative effect was very good in some cases, the pains, bleeding and ichor being promptly arrested although recurring later. As fulguration can be applied without general anesthesia, it has this advantage over cauterization. Another advantage is that the tissues are so modified by the fulguration that a cancer which at first seems entirely inoperable may be found to be within the limits, as what was supposed to be carcinomatous involvement of the surrounding tissues may prove to be merely serous infiltration. The best results were attained when the fulguration was supplemented by acetone treatment; the latter alone is also very useful. This is the application of crude acetone, poured into the vagina through a glass speculum until it fills half the speculum. It is left here for 10 minutes or longer and is then swabbed out and a glycerin tampon introduced into the vagina. This procedure is repeated from two to four times a month; the acetone hardens the tissues so that bleeding and ichorous secretions are checked, and it has a most beneficial palliative action. The benefit was striking in one case of inoperable cancer treated with the acetone alone. The patient has had about 80 of these applications during twenty-one months and looks and feels well except for pain in the pelvis, although the growth is so extensive that it almost fills the vagina and compresses the rectum. Another patient comes regularly twice a month from a long distance, requiring over a four-hour railroad journey, for her acetone treatment. The number of cases of uterine cancer in which fulguration has been used is not over 80 to date, he says. He knows of no other means by which patients can so easily

be relieved for a longer or shorter time. Although the fulguration has no permanent effect, it can be repeated at need. It was applied about four times in each of the cases reported in detail.

146. **Cancer of the Esophagus.**—Tiegel thinks that the prospects for recovery are not bad after radical operations on cancer low down in the esophagus. He advocates opening the abdomen and mobilizing the growth from below as a preliminary to the operation proper. He knows of only 2 cases in which the entire operation was done at one sitting. Exploratory thoracotomy is well borne by these patients. In one case the stomach and esophagus were readily reunited after resection of the sound esophagus for 6 cm. He regards tumors high in the esophagus as still beyond the reach of the surgeon.

147. **Early Diagnosis of Multiple Sclerosis.**—Finkelnburg calls attention to certain sensory disturbances which permit the diagnosis of multiple sclerosis at an earlier stage than is otherwise possible, reporting 3 typical examples and a further group of cases in which the ultimate outcome confirmed the presumptive diagnosis based on the change in deep sensibility in the arms while the superficial is still intact, accompanied by an inability to recognize objects by the sense of touch. These sensory disturbances subside to recur again after a longer or shorter interval; not until long afterward does the clinical picture of multiple sclerosis become unmistakable. In one of the cases reported a man of 26 without trauma or preceding infectious disease noticed the progressive development of sensory disturbances in the right arm, shoulder and side of the chest, as if the arm were "asleep," with occasionally severe pain and incapacity to use the arm in drawing, which was his occupation. After being fully incapacitated for a time, complete use of the hand was gradually regained and retained for 6 years when the symptoms returned, but affecting more the legs and vision, and soon progressed to unmistakable multiple sclerosis. In another case a young man presented a transient paralysis of the left arm, aphasia, dysarthria, and disturbances in the deep sensibility of the right hand. No signs of pressure on the brain were observed at any time but the affection rapidly progressed, with spastic paresis, anarthria, bladder disturbances and death in less than six weeks. The diagnosis wavered between multiple sclerosis and multiple neoplasms, but autopsy six weeks after the onset of the severe phase revealed multiple sclerosis. In 2 other cases the sensory disturbances were restricted to the arms—merely isolated changes in the deep sensibility of the right or left hand, accompanied by paresthesias. These patients were men of 19 and 22. No other nervous disturbances were evident except a tendency to slight paresis in the limb involved and to slight nystagmus or suggestion of ataxia in the arm. In both cases the symptoms gradually subsided completely and the patients still feel well 4 and 2 years afterward, but there are signs in both of oncoming multiple sclerosis. In 8 other cases of fully developed multiple sclerosis he was able to ascertain a history of sensory disturbances like the above before the development of the actual trouble. The interval was as long as 10 years in some of the cases. Especially characteristic is the isolated disturbance in the deep sensibility and the course of development in its successive progression and complete decline.

Virchows Archiv, Berlin

April, CC, No. 1, pp. 1-192

151 The Two Hundredth Volume of the *Archiv*. (Rückblicke.) J. Orth.
152 Waxy Transformation of Muscle *Fibers*. (*Die Zerreissungen der Muskulatur, die wachsartige* [illegible] der [illegible] Massenligat[illegible] [illegible] derselben [illegible] zu [illegible] beobacht[illegible].) R. Thoma.
153 Morphologic Research on Muscle Glycogen and Method of Fixation for It. P. Neukirch.
154 Peculiar Cell Forms *in Dental* Granulomas. (Eigentümliche Zellformen bei Zahngranulomen.) H. Dreuw and C. Rumpel.
155 Experimental Research on *Formation of* Bone from Displaced Periosteum Osteoblasts. (Zur Frage der Knochenbildung aus [illegible].) T. Tsunoda.
156 Multip[illegible] Lymphosarcoma of the Lym[illegible]iome mit Lymphosarkom der [illegible]
157 *Tumor [illegible] Geschwülste des Corpus pineale.) A. M. Pappenheimer.
158 Endothelioma *of the Dura. H. Ribbert.*
159 Case of Bilateral Cystic Suprarenals. (Fall doppelseitiger [illegible]) B. de Vecchi.
160 Be[illegible] Vermiformis in Intestinal Catarrh. (Verhalten des Epityphlon bei Darmkatarrhen mit bes. Berücksichtigung des kindlichen Alters.) M. Meyer.

157. **Tumors in the Pineal Gland.**—Pappenheimer gives the clinical and autopsy details of the case of a boy of 10, previously healthy, who developed symptoms of a brain tumor; the sudden onset and brief duration of the affection were particularly noticeable. The main symptoms had been headache, vomiting, stupor and severe optic neuritis. A tumor the size of a walnut was found in the region of the pineal gland, its characteristics entitling it to be called an ependymal neuroglioma. He compares the data with those of 37 other tumors of the pineal gland he has found on record, Virchow opening the list in 1863. The age of the patients ranged from 2, 4, 6 and 9 up to 50 and 59 years. Only 3 were women in the 31 cases in which the sex was mentioned.

Wiener klinische Wochenschrift, Vienna

April 28, XXIII, No. 17, pp. 614-650

161 *Pathogenesis of Epileptic Seizure. A. Fuchs.
162 Connection Between the Suprarenals and Increased Pigment Production. (Beziehungen gesteigerter Pigmentbildung zu den Nebennieren.) H. Königstein.
163 *Relative Benignity of Many Sarcomas and Carcinomas. (Zur Frage der relativen Gutartigkeit mancher Sarkome und Karzinome.) H. Koschier.
164 Bilateral Deafness after Injury of the Head. (Fall von beiderseitiger Taubheit nach einem Kopftrauma.) O. Mayer.
165 The Wassermann Reaction in Syphilis and Psoriasis. G. Gjorgjevic and P. Savnik.
166 Dislocation of Carpometacarpal Articulation. (Zur Kasuistik der Luxationen.) J. Berdach.

161. **Pathogenesis of Epileptic Seizure.**—Fuchs reports experimental research on convulsions of toxic origin (cocain) and on means to control such convulsions. It seems to be evident that sodium bromid has a specific action on the cortex, he concludes, and that its action is restricted to the cortex. It thus controls the cortical elements of the epileptic tendency, but has no influence on the subcortical element, the tonic spasm. His research has shown further that the effect of the administration of the bromids can be gaged by the difference in the behavior of the reflexes with a cortical lesion in one hemisphere. The reflexes on the side affected become abolished under the influence of the bromid, while they persist unmodified on the sound side. This reaction to the bromids was pronounced in 18 out of 21 cases of epilepsy with hemiplegic symptoms. For example, a boy with right hemiplegia had the superficial abdominal reflexes alike on both sides. Forty-five minutes after ingestion of 1.5 gm. sodium bromid the abdominal reflexes on the affected side were abolished and the Babinski positive while on the sound side there had been no change in the reflexes. This behavior of the reflexes was striking in 6 cases, as he relates in detail. In the remaining 59 cases of epilepsy little if any benefit was derived from the bromids. There was nothing in these cases to indicate a cortical lesion.

163. **Relative Benignity of Certain Cancers.**—Koschier reports in detail 8 cases of sarcoma or carcinoma in the upper air passages in which the cancer spontaneously retrogressed or subsided after an entirely inadequate operation. The growths must have been of very slight virulence and the individuals exceptionally resistant. In one case a woman of 28 had no recurrence for nearly three years after partial removal of an epithelial carcinoma in the nasopharynx. When it recurred, mercurial treatment was instituted which seemed to aggravate the growth and the patient soon succumbed to its progress. In another case a woman of 42 refused to permit the removal of an epithelial carcinoma in the nasopharynx and accustomed herself to breathing through the mouth after slight improvement had followed the exploratory incision. The cancer has persisted through 9 years without inducing cachexia, and the patient is free from further disturbances, except that vision in one eye has been lost in the last year, and there is now exophthalmos. He does not know of another case in which a histologically diagnosed carcinoma has persisted free from glandular or other metastasis and cachexia for more than 9 years. The features of these cases bear some resemblance to those of mouse cancer; they suggest the pos-

sibility that recoveries after extensive operative treatment may sometimes be due to the nature of the process rather than to the surgeon's skill.

Zeitschrift für klinische Medizin, Berlin

LXX, Nos. 3-4, pp. 185-357. Last indexed April 30, p. 1488

167 Estimation of Viscosity of the Blood. (Zur Kritik der Viskosimetrie des Blutes.) H. Determann.
168 Interpretation and Importance of Esophagocardiogram. W. Janowski.
169 *Auscultation in Testing Heart Functioning Before and After Light Exercise. (Zur Functionsprüfung des Herzens.) J. Tornai.
170 Pathology of Addison's Disease. II. (Glykogenschwund nach doppelseitiger Nebennierenexstirpation bei Hunden.) O. Porges.
171 The Iodophil Substance in the Leucocytes. (Die iodophile Substanz der Leukozyten und ihr Verhalten zur Bestschen Färbung.) P. Neukirch.
172 Diastatic Ferment in Adrenalin Glycosuria. (Das diastatische Ferment in der Adrenalinglykosurie nebst Bemerkungen über [illegible] Schirokauer and G. G. Wilenko.
173 [illegible] Diapedesis in Spontaneous Bleeding. [illegible] der Diapedesis bei den spontanen Blutungen.) C. Focke.
174 Relations between Optic Activity and Reduction of Diabetic Urine. (Weitere Studien über die Beziehungen zwischen optischer Aktivität und Reduktion von Diabetesharnen.) H. C. Geelmuyden.
175 *Relations between Disturbances in Innervation and Organic Heart and Vessel Disease. (Ueber das Verhältnis zwischen [illegible] organischen Herz- und Gefässer-[illegible]
176 Ca[illegible] (Form von Mischseptikämie: *Micrococcus melitensis* und *tetragenus*.) S. Ceraulo and G. Vetrano.
177 Chemical Changes in Myocardium with Heart Disease. (Ueber chemische Veränderungen des Herzmuskels bei Herzkrankheiten.) C. v. Rzentkowski.
178 Angina Pectoris in the Light of the Past. (William Heberden—Angina pectoris.) J. Pawinski.
179 Influence of Respiration on Blood-Pressure and Size of Heart. (Einfluss der Respiration auf Blutdruck und Herzgrösse.) G. Holzknecht and L. Hofbauer.

169. **Functional Tests of the Heart.**—Tornai has elaborated into a system the method of estimating the functional capacity of the heart by auscultation of the sounds audible as an artery is compressed by a Riva-Rocci cuff and the compression then gradually released. The stethoscope applied to the artery below, where it divides, will perceive a maximal systolic sound which becomes rhythmical with each systole as the pressure becomes lower and lower after removal of the compression until the sound finally disappears. There is a regular variation in the intensity and characteristics of the sound heard under these circumstances, varying from the maximum to the minimum of the pressure artificially heightened by the compression. This auscultatory pressure measurement is proving valuable as a means of estimating the functional capacity of the heart, and he tabulates the findings in a number of cases before and during treatment. In one case of Addison's disease conditions in the blood pressure were restored approximately to normal during a systematic course of epinephrin treatment, but in a second, similar case, the abnormal auscultation findings persisted and no benefit was derived from the treatment, the patient soon dying. Tornai urges others to adopt this simple and reliable method of estimating the dependability of the heart and the improvement and strengthening of the heart under appropriate therapeutic and other measures. He adds that it is the most difficult, but at the same time the most satisfactory, task of the physician to estimate in each individual case the actual functional capacity of the heart, conserve its resources and train it to increased functioning. All this is facilitated by this method of auscultation.

175. **Relations Between Disturbances in Innervation and Organic Heart Disease.**—Pawinski comments on the remarkable influence of heart disease on the mind and moods, which feel its influence to a greater extent than is the case even in tuberculosis. Patients with heart disease as a rule do not feel badly or depressed until the fact that they have organic heart disease is revealed to them. The depression that follows is peculiarly aggravated as more serious symptoms follow. With a valvular defect associated with a tendency to neurasthenia or hysteria, or both, there is generally either excitement with unusual cheerfulness or a hypochondriac depression. The first type is observed mostly with a valvular defect of rheumatic origin in the young, of a lively, excitable temperament, fond of sports and excesses. It is possible that the abnormally powerful contractions of the heart, sending exceptionally large waves of blood to the brain and then sucking it all away again may maintain the condition of extreme excitability. This type is also observed with pure mitral stenosis or insufficiency especially in women. The changeability of the objective symptoms is a special feature of this group, the diagnosis wavering between valvular defect, chronic disease of the myocardium and a mere cardiac neurosis. The morose type is most common in men with mitral insufficiency. Recurring dyspnea accompanied by depression, especially in the obese, psychic asthma occurring often at night, especially with a tendency to obesity, during the menopause, and also the climacteric cardiovascular weakness and the dyspnea simulating angina pectoris which is observed at times in men, especially after exercise—all these are due to disturbances in the innervation, but they may blend into or accompany an organic affection. Sometimes the functional disturbances mask the organic trouble or pave the way for their development. Pawinski is convinced that disturbances in the sexual sphere are at the root of most cases of heart neuroses. The knowledge of the relations between the innervation and the circulation is of extreme importance for the general practitioner, he adds, as on this depend not only the prognosis but the whole plan of treatment, and it protects against too exclusive reliance on heart stimulants, while it points the way to effectual psychotherapy.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A STUDY OF THE ANATOMY OF WATSONIUS (N. G.) WATSONI OF MAN AND OF NINETEEN ALLIED S[illegible] TREMATODE WORMS OF T[illegible] W. Stiles and Joseph [illegible] alth and [illegible] boratory, [illegible] Pp. [illegible] Wash-[illegible] of Documents] Government Printing Office, 1910.

PULMONARY TUBERCULOSIS AND ITS COMPLICATIONS. With Special Reference to Diagnosis and Treatment for General Practitioners and Students. By Sherman G. Bonney, M.D., Professor of Medicine, Denver and Gross College of Medicine, Medical Department of the University of Denver. Second Edition. Cloth. Price, $7 net. Pp. 955, with 243 illustrations. Philadelphia: W. B. Saunders Co., 1910.

A CONTRIBUTION TO THE COMPARATIVE ANATOMY OF THE PROSTATE GLAND. Being a Thesis for the Doctorate of Philosophy in Biology at the Illinois Wesleyan University, Bloomington, Ill., June 17, 1909. By C. W. G. Rohrer, M.D., Associate Professor of Pathology and Assistant in *Genito-Urinary Diseases*, College of Physicians and Surgeons, Baltimore. Cloth. Pp. 124.

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METHODS FOR EXTENDING POPULAR EDUCATION IN PUBLIC HEALTH AND PREVENTIVE MEDICINE*

SENECA EGBERT, A.M., M.D.
PHILADELPHIA

If a text were necessary for my address to you to-day, I should at once select the declaration of the revered Pasteur that "it is within the power of man to rid himself of every parasitic disease." Correlated with this is the more recent and almost equally impressive statement of Prof. Irving Fisher that "fifteen years at least could be at once added to the average human lifetime by applying the science of preventing disease," and that "more than half of this additional life would come from the prevention of tuberculosis, typhoid, and five other diseases, the prevention of which could be accomplished by purer air, water and milk."[1]

Note that this latter authority says that these results could be achieved "at once" and, by inference, with the knowledge that we already possess concerning the causation and elimination of transmissible maladies and the possibilities of preventive medicine. We need not wait indefinitely for further necessary contributions at the hands of those searching for the secrets of unsolved problems of disease; we have abundant equipment for action and results even now.

In raising the question as to why we are not already enjoying a consummation so devoutly to be wished for, I would not have you feel that I desire to minimize or to mar in any way the glory of the wonderful and all-important achievements in the conservation of human life, health and happiness that have already been secured by zealous workers, almost all of whom, I am proud to say, have been members of our beloved profession. Their fame is secure, but their work has only blazed the way and opened up vistas of the far greater possibilities of the future.

Nevertheless, the query is insistent why, where so much is at stake, the potentiality of the future is not already the accomplishment of the present. Considering what physicians actually do and have always been striving to do along these lines, it cannot be fairly said that the incompleteness of the present status is due to lack of either faith or effort on their part. Whether we like it or not, we must realize that the time has come when it is absolutely necessary that others—yes, many others of many varied pursuits and callings—should take up a share of this portion of the "white man's burden" in which the physician has been the pioneer. A striking analogy in the field of human uplift which exists at the present moment will serve to validate this latter assertion.

From time immemorial the clergy of practically all religious creeds have been the leaders in and have done the chief work in all phases of religious activity. The laity have been content to give moral and financial support, more or less hearty according to conditions and circumstances. But suddenly within the last few years there has been developed a tremendous laymen's missionary movement in which are enlisted men of all creeds and denominations, which has already shown great power and influence and which promises to accomplish more in a few decades than has been achieved in many centuries of the past. I could speak of other manifest signs of social awakening, of the realization on the part of the good citizen that he is his brother's keeper, and that active altruism must supplant selfish inactivity and indifference. Therefore, the time is ripe to call the laity to our aid, and already the first steps have been taken toward this end.

Thus, we find not only that do current newspapers and magazines contain with increasing frequency popular articles on subjects pertaining to preventive medicine, but that the American Medical Association has organized a Board of Public Instruction on Medical Subjects—whose work will be largely along the lines that I am indicating—and especially that at our meeting last year in Atlantic City this Section became sponsor for and the Association authorized the Public Health Education Committee, of whose purposes and work I shall have more to say later.

It is entirely unnecessary and it would be a waste of your time and an abuse of your patience even to mention the many subdivisions and phases of preventive medicine which any plan of general popular education for this purpose involves. My desire is rather to discuss some of the means whereby positive results may be most readily secured under present conditions and by which the most profitable expenditure of effort and energy may be made. Nor am I unmindful that some, if not all, of the suggestions may seem trite and commonplace to you who have been for years engaged in the pioneer work of this great propaganda. In my own teaching I constantly find the tendency to overlook or to minimize important features because, through frequent repetition, I have become imbued with the feeling that they must be known and recognized by every one. Nevertheless, we have evidence on every hand that many of the simplest sanitary truths and principles are entirely unknown or unheeded by many of even the intelligent members of our communities. And as some of the most important and most insistent features of our work has to do with those persons who cannot be thus classified, but whose ignorance prevents even the appreciation of the importance of hygiene and prophylaxis, I trust that any review of familiar methods may not seem inappropriate and out of place.

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* The Oration on State Medicine in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Abstract of the Report on National Vitality of the Committee of One Hundred on National Health.

Moreover, I shall scarcely attempt to present the several methods in a logical sequence or with any idea of their respective correlation. In fact, I doubt whether one could place them in scientific and orderly array at this time, especially when different localities and conditions demand varying means and application of means. But, as our hope is in the future, and as the children of this generation are to be the citizens of the next generation, I may as well begin with them and with the chief medium of their education, the schools. Schools imply teachers, and so the question arises: Whence come the teachers and what preparation have they had for giving instruction, both subjective and objective, both didactic and practical, on the fundamentals of health and life? Surely no one at this day will cavil at the proposition that physical development is as important as mental, and that every child should be informed as to the functions and needs of the body, as well as of the mind. But we have scarcely appreciated the equally important fact that the future citizen should be taught his duty in conserving the welfare of others and the altruistic aims of modern hygiene and sanitation. Can his teachers give him this training? I think that any extended investigation will convince you that the number of those capable of doing this in a thoroughly satisfactory manner is very small in comparison with the total number. No criticism of the average teacher is altogether fair under present conditions, however, as the blame for his or her inefficiency lies higher up and chiefly with us, ourselves. Really, we are more concerned with the future, provided we date from now.

According to the United States Commissioner of Education, there were in the public and private normal schools of the country for the year ending June, 1909, 82,288 students enrolled in the regular training courses for teachers, and 14,155 graduates therefrom. Added to these, there were in public and private universities, colleges and high schools enough others pursuing teachers' training courses to bring the total up to 103,824; and if the latter institutions "had furnished from their normal students the same proportion of graduates" as did the normal schools, the additional "number would have been 3,704, thus increasing the number of trained teachers to be added to the teaching force of the country in 1909 to approximately 17,859." Provided that each one of these teachers shall have been equipped and qualified to teach what every boy and girl has a right to and should know about personal hygiene, public health and preventive medicine, there is here a mighty power for good whose benefits to the next generation and to the country's welfare no man can calculate. And yet this is but one year's output.

Few here would argue, I take it that any pupil of high-school grade should not be thoroughly instructed in the fundamentals of sanitation and public health, or that our higher institutions of learning should not help to make better citizens along these lines. What a potentiality for good, then, was there enfolded in the 1,034,827 students of high-school grade that the Commissioner of Education tells us were enrolled for the year ending last June, or in the 331,418 students in higher education, even though the proportion of the former was only 11.72, and of the latter, 3.75 to each one thousand inhabitants!

In addition, more than sixteen million other children were enrolled in the public schools of the country in 1909, and it is also estimated that the total number of children from 5 to 18 years of age was 24,613,783, or almost half a million more than the estimated number of males 21 years of age and over. Is it not worth while to attempt to awaken the interest of our superintendents of public instruction and other educational authorities?

Another way of reaching many of these children and some of the adults is through the public playgrounds and recreation centers which are being established in many of our cities. The number of these is already greater than most persons realize. Thus, in 1909, there were 1,535 of them in 267 of the 336 municipalities in which supervised playgrounds are maintained, and in 259 of these cities there were 3,756 persons employed as supervisors and play-leaders. The latter large and increasing body of intelligent men and women, many of whom have had expert training in physical culture, can exert a tremendous influence, not only indirectly by subjectively developing in their charges an active appreciation and desire for health and sound bodies, but directly by inculcating whenever opportunity offers many of the fundamental principles of personal hygiene and public health. That this may be done most happily in an environment of baths, gymnasium apparatus, open-air sports and games for children of all ages must be obvious to all.

Leaving the children for a time, and considering the public at large, we find it no small problem to determine how we may reach and benefit the largest number most efficiently. Those who have undertaken the work have found that no one plan or method will suffice, and that the best intentions and service is oftentimes illy repaid or appreciated. In planning work of this kind, however, it may be said that the methods adopted should be devised so as to attract and hold the attention of the individuals concerned and to convince them that they are personally and especially interested. We cannot afford to ignore the fundamental principles of psychology and pedagogy in this domain.

Heretofore the brunt of what work has been done has fallen on our national, state and municipal health officers and their assistants, and the country will ever owe an irredeemable debt to these men who have done and are doing such valiant service. They realize, however, that the task has grown too large for them, backed, though they are with official power and funds, and they welcome the aid of every progressive physician and earnest citizen who will help to further the physical welfare of the people committed to their care.

Among the efficient means which these health officers have heretofore employed to extend sanitary knowledge are, on the one hand, the weekly or monthly bulletins and the annual reports on the state of health of the communities under their respective jurisdictions, and on the other, the special tracts or pamphlets carrying precise information relating to the precautions to be observed when certain specific diseases occur in either sporadic or epidemic form. The latter have the great advantage that they reach the individual when he is in a highly receptive mood and most likely to heed and to be impressed by the information they contain. As for the bulletins and reports, there is the twofold danger that their distribution may be too much limited, whereby they may fail to reach those whom they might benefit the most, and also that they may fail to interest the average individual by being made simply a compilation of dry vital statistics. There are, however, many of these publications to which this latter criticism does not apply, a notable example being Chicago's weekly bulletin which bears the title "Chicago School of Sanitary Instruction," and which has at its head the statement that it is "sent free to those of our citizens who should be benefited by it." The annual health reports of our states and larger cities also contain much valuable and interesting information, and are worthy of a wider distribution and more extensive study than, I fear, most of them receive.

A number of progressive health officials are now using the newspapers of their territory more extensively than ever before as a means of reaching the public and keeping it in touch with the progress of their work, their needs and their purposes and aims. The Commissioner of Health of my own state, Dr. Dixon, systematically takes his constituency into his confidence by utilizing the facilities of the newspapers of the state to the extent of 600 or more, and the corresponding official of Philadelphia, Dr. Neff, has likewise greatly strengthened his administration in the public estimation by a free and frequent use of the city papers.

Other agents under the direction of directors, commissioners of boards of health are the medical and other inspectors, including school and visiting nurses, all of whom are enabled to give direct, positive and timely instruction and advice to those who most need it and who are often least likely to get it from other sources. School medical inspectors also have demonstrated their value and the enormous advantage they have in detecting abnormalities and defects in their incipiency. Dr. Osler is reported to have calculated that there was in New York City "on account of the lack of medical supervision of educational work a yearly financial loss of $1,666,666," and also to have said in effect that "he considered it of greater importance to the nation that the question of sound teeth be intelligently considered than that the consumption of alcohol be restricted, important as the latter problem is."[2]

Reference to the newspapers calls attention to the fact that in the public press we have one of the most powerful and practicable factors for disseminating information and developing education along our special lines, and that as yet we have barely tested its possibilities. It is only when we realize that we have in this country almost 2,500 daily and over 16,000 weekly newspapers, not to speak of the great number of popular magazines and periodical publications of other kinds, that we can appreciate the opportunity they give us to reach the mass of the population. Moreover, their editors and publishers, almost without exception, are ready and even eager to give us abundant space for anything authoritative that has to do with the improvement of public health. They have realized even more quickly than we have the popular demand for such information. In evidence of this, note the recent increase in the number of magazine articles on health topics.

It certainly should not be difficult to plan measures by which we could make use of this great medium to the fullest extent. Suppose, for instance, a health column supplied by some competent authority were printed in every weekly newspaper in a given state throughout the year—something by no means difficult to secure. Comparatively few families subscribe for and few individuals read more than one of these weekly papers. Hence the same "copy" could be used for many, either simultaneously or by judicious distribution, and the same editorial effort applied to an extended territory. If, too, the state department of health should undertake such work, as is, in fact, being done in my own state, great economy of labor and expense would be secured, the matter for publication would go out with the stamp of authority, and the health department would be brought into that close touch with the people that is so essential for its success.

A caution is to be observed, however, whether state officials or others take up this line of work. Such published matter should be authoritative, educational and not above the capacity of understanding of the average reader. If the series could in part develop systematic instruction along certain lines, so much the better, but care should always be had that misleading or exaggerated statements should not be made, and that statistical or other information should be well grounded in fact.

Magazine articles, such as those by Dr. Woods Hutchinson in recent numbers of the *Saturday Evening Post*, and others with which you are doubtless familiar, are also of great value in fixing and molding opinion, and writers with special talent in this line should be encouraged to contribute their aid to the work. Likewise, publishers of religious, trade, agricultural and other specialized periodicals should also be urged to make the relationships of public health to their respective fields of work frequent and special features of their publications. As I have indicated, the opportunities for disseminating information in this way are almost innumerable.

Life-insurance companies and fraternal organizations that maintain insurance departments are in an especially favorable position to greatly benefit both their own and public interests, and some of them are already seizing the opportunity by official communications to their medical examiners and policy holders. In a circular letter to its medical examiners, dated April 15, 1910, the chief medical director of the Provident Savings Life Assurance Society says:

> The Policy Holders' Health Bureau, established by this society in August, 1909, has passed beyond the preliminary experimental stage. Tangible and practical results are already in evidence, which warrant the prediction of a permanent and growing field of usefulness for the activities grouped under the organization of such a bureau. . . . We have referred to our bureau work as "semi-public," for the reason that as the number of policy-holders benefited by our system increases, the general public will also become informed as to the value of periodical medical examinations, and there will be a growing tendency to employ physicians as inspectors and regulators of human machinery, rather than as necromancers who are expected to work miracles in the cure of established and progressive disease.

Dr. Dwight, medical director of the New England Medical Life-Insurance Company, says:

> For more than sixty years the life-insurance companies of this country have been storing up ammunition and developing an organization which, if properly used, would be almost sufficient in itself to turn the tide of battle for public health in favor of the forces of scientific effort.

Dr. Hiram J. Messenger, actuary of the Travellers' Insurance Company, prepared a table for Professor Fisher's Report on National Vitality, to show that the life-insurance companies could probably make money now by taking a hand in the public health movement, and says:

> This table shows that if the companies were to expend $200,000 a year for this purpose and as a result should decrease their losses by the almost insignificant amount of twelve one-hundredths of 1 per cent., they would save enough to cover the expense. If such a plan as this were placed on a purely scientific basis and carried out by good business methods and all the companies pulled together for the common good, I should expect a decrease in death claims of more than

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[2] Fisher: Report on National Vitality, p. 73.

1 per cent. And a decrease in death claims of 1 per cent. would mean that the companies would save more than eight times as much as they expended or would make a net saving of more than seven times the expense—which would be about a million and a half dollars a year.

I need not dwell on the importance of public lectures on health topics, but it must be noted that these will not realize their full value for good unless attention be given not only to the selection of speakers and their choice of subjects, but also to proper advertising and the securing of large and interested audiences. In many instances, their values would be enhanced if they were given in connection with public exhibits, such as those on tuberculosis recently held in many of our cities; and in any community there would doubtless be a decided gain if most or all of such lectures in a season were systematized and arranged in a logical course under the superintendence of some organized body, such as a county medical society, women's club, college settlement or the like. It is also advisable that such organizations in the large cities should provide lectures in their respective tongues for the masses of foreign population that we find in certain districts. It may even be advantageous to increase the attraction by illustrating the talks with lantern-slides, or by providing some additional musical entertainment. But it is on these addresses and the visits of medical inspectors, district nurses and other sanitary missionaries that we must chiefly rely for the principal education of these alien masses of our population.

In fact, I would recommend that in each of our towns and cities of moderate size, and in localized districts of the larger cities, there should be organized public welfare clubs, whose chief business should be the carrying on of this propaganda of public health work and sanitary instruction. Such clubs might be independently developed, or they might be made up of representatives from associations and organizations already in the locality, such as the beneficial and fraternal societies, women's or mothers' club, library association, hristian Endeavor and church clubs, etc. They should naturally include the physicians and clergy of the community, and every public-spirited man and woman who has an active interest in neighborhood improvement and the welfare of humanity at large.

Such clubs could thus not only arrange for a systematic course of public lectures and exhibits, but could institute and develop public health measures and improvements of all kinds. You will at once realize the many lines of activity which they might follow. They could call on the central health department of the state for statistics, charts and other material for exhibits on tuberculosis, typhoid fever, etc., and, in passing, I would remark that it would be well for the state health departments to have such exhibits prepared for the special use of just such clubs and organizations, which could use them in turn and on proper request and notification. The winter course of lectures would include discussions of local sanitary conditions, the dangers of patent medicines, the prophylaxis of social disease, the theory and use of antitoxins and vaccines, as well as the ordinary questions of hygiene, and would soon be appreciated by the public as of great educational value.

Organizations such as these could also make use of a means of arresting and fixing public attention that has as yet been too rarely employed—the public poster. These posters, which have already been used in some of the large cities, as in Philadelphia and Chicago, are probably more practicable in smaller communities, because the smaller number needed greatly reduces the expense. Notwithstanding the multiplicity of newspapers and magazines and the opportunities they offer for exploiting our work, we must realize that not only do many of their users peruse them but carelessly and hurriedly, but also that many of the general public do not read them at all. Hence we should provide some other means by which "he who runs may read" and whereby he may be induced to take heed of that which is for his own or his neighbor's welfare. This the poster does, and it may be used in all sorts of places, such as billboards, shop-windows, street-cars, etc., where it will catch the eye and fix attention.

Care should be taken not to attempt too much on a single poster, since an excess of reading-matter in small type may lead to a failure to attract due notice. A few pithy, epigrammatic sentences, or often a single one, with at times a touch of local or timely wit, or, perhaps, a sketch or cartoon, will do more to fix the purport of the poster in the minds of those who take it in at a glance in passing than will a lengthy exposition that requires a halt of five minutes or so for its reading. We can afford to take a lesson here from successful advertising agents whose business it is to know human psychology to the end that they may drive impressions home within the space of the fleeting moment.

I feel confident that the judicious use of such posters in a community of moderate size would do much to secure public attention and excite comment, and that the public welfare clubs, health officers or others may well employ them to do what the newspaper and magazine articles cannot do. The poster will also be especially useful when printed in other tongues than our own and properly distributed in the foreign districts of our larger cities.

A failure to mention the potential assistance which we may have from the clergy and our churches would be to lose sight of a most important and powerful component of our body politic. The signs of the times show most positively that henceforth the minister to the soul and the physician to the mind and body must be more closely linked in their labors than ever before, that they must work together and not pull apart or against one another, and especially that this great field of preventive medicine is the domain of both. Ministers of all denominations should be encouraged properly to encourage and to instruct their congregation in the acquisition of the fundamental principles of bodily hygiene and altruistic sanitation and in the appreciation of these as important and necessary to the securing of spiritual health. Churches and parish-houses which now are idle on too many week-days should be opened and used for public lectures and meetings. What places could be more appropriate for joint talks from pastors and physicians on questions that pertain to the proper instruction of youth, the abuse of alcohol, social purity, etc.? Where better could the two professions join to combat false gods and dangerous doctrines? The physician can assist the preacher by giving him sound information and trustworthy data for his sermons, and by encouraging him in dealing with such topics, and the preacher can support and help the physician in his campaign against all that makes for disease and pain and suffering in their common neighborhood. That the congregation can do much in doing their share of the work, if they are only shown the way, is so obvious that I need but mention it.

Within the past few years the Department of Health of Pennsylvania has established 114 tuberculosis dispensaries, which are doing much good in an educational as well as philanthropic way. The professional nurse, who is attached to each of these dispensaries is especially valuable in this direction and "her ministrations amount to a liberal education in the treatment of tuberculosis." She not only makes a first-hand investigation of each patient's case, securing data as to his family history, occupation, financial resources, etc.; but she visits him at his home and there instructs him and the other inmates as to his proper care and handling, how the others are to escape infection, and especially devotes particular attention to diet, telling the housewife what to cook and how to cook it. Thus far over 130,000 of such visits have already been made, each one affording an opportunity for instruction in sanitary details with a direct and immediate application thereof. The value of such educational work needs no argument for its appreciation.

I might continue to consider with you other ways and means for carrying on this missionary work of ours, but your patience may be approaching the limits of tolerance. Therefore, as the last but by no means the least of these beneficent and efficient agencies to which your attention is directed, I trust you will give full support and encouragement to the work and efforts of the Public Health Education Committee that had its inception in this Section a year ago.

No one at this time can afford to deny that one of the most powerful factors in general public uplift and especially in the extension of the very work in which we are interested, is the collective influence of the good and intelligent women of this country, as manifested not only in their special clubs, mothers' meetings, etc., but also in their individual homes and neighborhoods. It is this influence which the Public Health Education Committee desires to weld and unify into a mighty agent for this special work, and both this attempt and the primary endeavor to enlist in the campaign the women members of the American Medical Association is, I believe, worthy of our hearty commendation and support. Here certainly is a wide field for the energies of the woman physician and none of us need feel jealous or envious of her entry on it. She can do more in certain directions than can the man; she has more leisure and adaptability for certain phases of it, and she can bring in, as the man cannot do, the joint influence and power of other women's organizations that will all work for better and healthier homes, communities and the common country. Let us congratulate the committee, therefore, on what it has already accomplished and help it to do still more in the future.

I shall not take time to do more than to mention the work of our Board of Public Instruction in Medical Subjects, for I assume that you are all so familiar with it that nothing that I could say would add to your sense of its importance, especially in this field of ours.

With this review of the means at our command, and from which many details have necessarily been omitted, I trust that I have made you feel that we are well armed for the educational campaign which must be conducted before we can hope to secure the results in the conservation of life, health and human vitality that we know it is in our power to have. Dr. Rosenau has recently said:

> The public health militia that I have in mind calls for the enrollment of all good citizens. Preventive medicine is the watchword of the hour, and enlistment in the cause can come only through education. There are two important factors in efficient public health work. One is the gaining of new knowledge through scientific research; the other is the diffusion of this knowledge through education. The two go *hand in hand*. Not only the medical profession, but the people must be the reserve militia in any effective warfare against disease.

Professor Fisher likewise says in the conclusion of the summary of his report from which I have already quoted:

> Money estimates of waste of life are necessarily imperfect and sometimes misleading. The real wastes can only be expressed in terms of human misery. Poverty and disease are twin evils and each plays into the hands of the other. From each springs vice and crime. Again, whatever diminishes poverty tends to improve health, and *vice versa*. . . .
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> The conservation of our natural resources—land, raw materials, forests, and water—will provide the food, clothing, shelter and other means of maintaining healthy life, while the conservation of health likewise tends in many ways to conserve and increase wealth. The more vigorous and long-lived the race, the better utilization it will make of its natural resources. This will be true for two reasons in particular: First, the greater inventiveness or resourcefulness of vigorous minds in vigorous bodies. Civilization consists chiefly in invention and the most progressive nations are those whose rate of invention is most rapid. Second, the greater foresight and solicitude for the future. As it is usually the normal healthy man who provides life-insurance for his family, so it will be the normal healthy nation which will take due care of its resources for the benefit of generations yet unborn. . . .
>
> Federal, state, and municipal boards of health should be better appreciated and supported. Their powers of investigation, administration and disseminating information should be enlarged. School hygiene should be practiced, and personal hygiene more emphasized. The multiplication of degenerates should be made impossible.

If one state, through the administration of one man and his staff and supported by the hearty co-operation of its municipal and county health officers, can within four years not only organize and establish a department of health almost *de novo*, but also show a positive saving to the commonwealth of $23,000,000 of human life value with an expenditure of $3,000,000; if it can, as Pennsylvania has done, within that time cut the typhoid mortality to less than half that it was before, bring down the tuberculosis death-rate from 134 to 120, and show a net saving of almost 14,000 lives, *is there not* every encouragement to continue with renewed energy whatever efforts we have been making in the past? Even though we are tempted at times to feel that much of the seed falls among thorns or on stony ground, we have no reason or right to conclude that the sowing is not well worth while; that the labor will not bring a bountiful harvest. Fortunate is he whose field of endeavor shows the promise of a more abundant reaping or fuller granaries in the end.

4814 Springfield Avenue.

THE INSTITUTIONAL TREATMENT OF NERVOUS AND MENTAL DISEASES*

THEODORE DILLER, M.D.
Clinical Professor of Neurology, University of Pittsburg
PITTSBURG, PA.

It is my pleasant duty in opening the proceedings of this Section to thank you for the honor you have bestowed on me in making me the Chairman of the Section for the year. I may further say that the honor is a real and unexpected one; for the first intimation which I had that I was to be chairman for the year was the report of the nominating committee to the Section at the meeting of the Association last year at Atlantic City. And this leads me to believe that, whatever may be said of the past, or of any other Section of this Association, in the Section on Nervous and Mental Diseases, medical politics plays no part whatever.

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* Chairman's address before the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-first Annual Session, St. Louis, June 7-10, 1910.

I believe that it should be the aim of this Section to discuss all the varied phases of nervous and mental diseases, and that its officers should endeavor to assemble together the best available men in the country on its program. And I further believe that it should be the especial aim of this Section to present the subjects of neurology and psychiatry in such clear, simple and attractive manner that its proceedings may serve to interest and instruct not only neurologists and alienists, but also general practitioners and internists and a certain number of those whose field of activity lies in work in other specialties. It may be truthfully said that the problems which engage the interest of the members of this Section also possess in themselves more or less interest for all members of the profession. Neurology and psychiatry in their several aspects and in their manifold interests call on those who pursue them as specialties to take more or less account of every other department in the broad domain of medicine and, indeed, much outside it, for example, law, social science and penology.

It is with this understanding of the subject that I have endeavored to cooperate with our secretary (and to work with him has been a genuine pleasure) in making out the program for this meeting.

The criticism is often made of programs of associations of neurologists and alienists that they present little or nothing on the subject of treatment; and for one, I have the feeling that this reproach is not wholly undeserved. Hence it has been our aim in making up the program for the Section this year to secure an unusual number of good and practical papers dealing with the treatment of nervous and mental diseases; and I believe that if you will look over the program in your hands you will agree with me that we have attained a very fair measure of success.

I wish to address the Section briefly on a subject which I believe to be one of vast and far-reaching importance, even though I shall be able to speak only in general terms and must treat it most inadequately and leave much that I should say unsaid. I refer to the institutional treatment of nervous and mental diseases.

This subject becomes one of vast importance when we consider the large number of patients for the adequate or proper care of whom institutional treatment is required. In nearly all cases of insanity institutional treatment is demanded and received; in nearly all the severer cases of inebriety institutional treatment is demanded, but in few is it received; and very many of the cases of organic and functional nervous diseases demand and some receive institutional care.

As years go by and hospitals for the insane improve their equipment, and as the public becomes better educated as to the value of institutional treatment for the insane and less and less suspicious of these institutions, the percentage of insane and feeble-minded outside of hospitals grows less and less, and these institutions everywhere throughout the broad land are becoming more crowded. Nor does the provision for additional accommodations in any state in the Union keep pace with the growing demands for such accommodations. Despite many drawbacks and obstacles, and despite the great work of improvement which yet remains to be accomplished, these institutions have made fair progress in their methods and equipment for the care and treatment of the insane and feeble-minded.

In this connection I desire to direct attention to the subject of the treatment of insane in institutions other than regular hospitals or asylums for the insane. So far as I know, there are only two general hospitals in the United States—St. Francis Hospital, Pittsburg, and Albany Hospital, Albany, N. Y.—which are equipped to receive insane patients. There are several large hospitals for the insane which are departments of general hospitals, but which possess separate buildings and separate managements and must be regarded as practically separate institutions.

I wish to say a word here regarding St. Francis Hospital in Pittsburg and its work to illustrate some of the points I wish to make. This is a large general hospital and has connected with it a psychopathic ward. In this ward or department there are about 100 patients, including a great many acute cases; and it has been the aim to have only acute cases in this department. A resident physician and intern devote all their time to this department, which is under the medical direction of three visiting physicians. The members of the medical and surgical staff are frequently conferred with regarding these patients. While the psychopathic department of St. Francis Hospital is not entirely ideal and much remains to be done to make it so, yet it stands for a most valuable principle, namely, the treatment of insane in a general hospital. This means much, very much. Our experience at St. Francis is that patients suffering from acute psychoses are admitted early, and that their friends do not feel that the same stigmata is placed on them going to and coming from this hospital as in the case of the regular hospital for insane. It is well known that certain psychoses can be and have been treated in general hospitals, but the difficulty is that if such patients become noisy or troublesome the management generally demands their removal. I am strong in the conviction that in every large city there should be at least one general hospital ready to receive cases of insanity and equipped to treat these patients. A large general hospital can easily have a properly equipped wing or even detached section to hold 25 or 50 patients, and thus it can accomplish a great purpose and fill a great need in any large community. The noise and disturbance of such patients can be kept from the general hospital if the wing or separate building is properly planned and built.

Psychiatry should be regarded as a department of internal medicine, and I trust that the time will come when the psychoses will be discussed in general textbooks in the practice of medicine. And the day is coming also, I trust, when patients with acute psychoses will receive treatment in general hospitals and not have to go to hospitals for the insane unless the disease is unduly prolonged or appears to be incurable. When the treatment of insanity is undertaken by general hospitals, as I have indicated, I believe that an entire change will come over the profession and the public regarding their attitude toward the insane. The profession will realize in a practical way that what is called insanity is an expression of sickness; and the laity will learn the same lesson. Another result would be that the skill of the various specialties would be brought to the insane; and these patients would be a constant source of education for all physicians connected with hospitals maintaining such psychopathic departments. And then psychoses would be described in the textbooks on the practice of medicine and the general profession would learn something about them.

It appears to me that, viewed from almost any aspect, the treatment of insanity in general hospitals is greatly to be desired and promoted. Nor do I believe that separate psychopathic hospitals, isolated and apart from the general hospital, possess the advantage which a psychopathic division of a general hospital possesses; for sooner or later they are sure to be regarded by the general public as "insane asylums."

There is a large and sadly growing class of individuals for whom large provision should be made for institutional treatment and for whom such provision is now sadly lacking if we are to hope to give anything like adequate treatment; I refer to the inebriate, addicted to the excessive and uncontrolled or uncontrollable use of alcoholic drinks or morphin, cocain or other drugs. The present inadequate treatment of inebriety is to-day, in my opinion, a standing reproach to society and to the medical profession. The inebriate who seeks or whose family seeks for him institutional treatment meets at all hands with invitations from quackish institutions whose treatment in the main is simple humbug. And yet I think that it will be generally admitted that for a large number of inebriates there can be no adequate treatment, indeed none worth the name, other than that afforded by a well-equipped institution. And such institutions are few in number; so few, indeed, that many an honest practitioner knows not where to find even one for his inebriate patient.

While there is and will be an increasing number of private institutions for inebriates, these are and must be wholly inadequate to meet the needs of the situation. As the result of much thought and investigation, I have reached the conclusion that the several states must provide separate institutions for inebriates, and such institutions should be governed by clear, adequate and comprehensive laws.

Massachusetts and Iowa are, so far as I know, the only states which at present maintain state hospitals for inebriates; and both have adequate laws governing them. We are fortunate in having with us at this meeting Dr. Neff, the superintendent of the Massachusetts State Hospital for Inebriates, who is to tell us of the workings of that institution. Minnesota is about to provide a state institution for inebriates, and the subject has been urged before the New York and New Jersey legislatures, but as yet without success.

In Pennsylvania, the state medical society has for several years been trying to persuade the legislature to build a state hospital for inebriates. A bill providing an appropriation for the creation of such an institution was passed by the last assembly; but it was vetoed by the governor because of his belief that the financial situation would not warrant this new expenditure. Pennsylvania already has a law which provides that an inebriate may be committed by a judge, after a hearing, to a "proper hospital or asylum" for a period not to exceed one year. Under this law, a number of inebriates have been committed to various hospitals for the insane throughout the state. Superintendents of these institutions are unanimous in saying that they do not desire these patients, as they do not properly belong there, that they are hard to get on with and upset the discipline of the institution. On the other hand, the inebriate himself strongly resents being committed to an insane asylum; and in consequence he goes there, when compelled to, in a frame of mind little calculated to effect a restoration to health having in it the elements of stability.

Our argument to the Pennsylvania legislature has been brief and to the effect that the adequate treatment of inebriety requires a separate and properly equipped institution and a proper law governing it and the inebriate. It was urged that, since the state has taken the first step in providing a law governing inebriates, it should logically take the second step and provide the institution which the law contemplates. We hope next winter to succeed in our endeavors with the legislature.

Thus it will be seen that already a start has been made in the matter of provision of state institutions for inebriates and I trust that in the near future we shall see the establishment of many such institutions, so that ultimately every state shall possess at least one.

And now, finally, I shall consider one other class of institutions, namely, sanitariums having for their object the care and treatment of persons suffering from organic and functional nervous disease. These institutions are of all sorts, kinds and descriptions and they are found in all parts of the country. They are large and small; meagerly equipped and elaborately equipped; they are operated by religious associations and by commercial companies and by individuals; they are ethical and semi-ethical and quackish in character. And after a large experience with them, covering something like a score of years, I am bound to say that, generally speaking, sanitarium treatment in this country leaves much, very much, to be desired. My objections to sanitariums are various. This one is entirely too large and has too many patients and too large and complicated machinery and possesses the "sanitarium atmosphere" which is oppressive and depressive. Another is small and badly equipped and affords too little diversion; treatment is slovenly and routine. It appears to me that it is perfectly proper and desirable that sanitariums should afford an opportunity for religious devotions, but it also seems highly objectionable to me that a religious atmosphere should be forced or obtruded on patients. Again, we find that some articles of diet are recommended and others prohibited which are in ordinary use, and thus patients run a great risk of becoming diet cranks. We see sometimes an elaborately equipped sanitarium with all sorts of apparatus, all of which looks very impressive to the casual visitor, but which is too often used improperly. It is used improperly, I believe, when used unnecessarily or too frequently, or when the ends to be gained are not properly considered. I have known more than one self-centered, introspective patient to be made worse by the constant round of ill-planned or unplanned examinations and "treatments" in sanitariums. Again, there may be an excellent medical man at the head of a sanitarium; but the physician finds that when this patient goes to the institution he did not see this excellent chief, but an underpaid and inadequate subordinate. Generally speaking, sanitariums do not sufficiently provide for outdoor games, exercises, walks and varied amusements; and the treatment is slovenly and too mechanical and routine.

Instead of going further into the matter of my objections to sanitariums as I have found them, I shall endeavor to make a little sketch of the ideal sanitarium as I see it in my mind's eye, and as one often finds it abroad; and as one very, very seldom sees it in this country.

It is not very large; it accommodates from 50 to 100 patients. It is situated in the country about three-quarters of a mile from the railroad and is reached by a charming drive; it is in the midst of a very charming landscape in which are found no objectionable features. A large wood in the neighborhood belongs to the sanitarium and has many paths and walks running through it, and these are marked off so that patients can estimate the distance they have walked. Scattered along these walks at intervals are various benches and a few pavilions.

A stable is attached to the sanitarium; drives in the neighborhood are attractive and varied. In a separate building, but very close to the sanitarium and connected with it by a passage way, is an amusement hall containing auditorium for private theatricals and concerts, etc., and in the basement there are billiard tables and a bowling alley and a swimming pool, all of which are used every day. Closely adjoining the amusement hall there is a small but well-equipped bathing establishment with Turkish baths and other provisions for hydrotherapy. Those taking Turkish baths have easy access to the swimming pool.

Now as to the sanitarium itself. It has been especially built and equipped for sanitarium purposes. The building is modest and attractive and entirely free from any freakish design. It has a home-like appearance. The furnishings throughout are simple and modest and thoroughly good, and the whole place throughout is absolutely clean. Nothing is obtrusive. The physician in charge is a man well known for his excellent general character, his ethical standing and his sound conservatism, and the fact that he keeps in touch and abreast with the medical world of the day. In short, he is a man of experience and soundness of character and he possesses tact in a high degree so that he gets on well with the various patients. His position is secure and his time is wholly devoted to his medical duties. He never hesitates to recommend the dismissal of a patient when such dismissal seems to be for the best interests of the patient or the institution. When patients become insane or unmanageable he has backbone enough to demand their dismissal and that they be placed in a proper institution.

The physician in chief is assisted by one or two younger medical men who breathe the atmosphere of their chief and work in complete harmony with him.

The various apparatuses for laboratory work and investigation and therapeutic purposes are at hand. These are used with caution and discretion and not in blind routine fashion and seldom needlessly. One of the main features of the sanitarium is the stress laid on individual treatment; and the doctor avoids, so far as possible, cut-and-dried routine in all his examinations and treatments. The rules governing the sanitarium are simple and clear. Nothing is obtrusive or "peculiar" in these rules regarding religion, diet or anything else. The dietary is simple, but sufficiently varied and thoroughly good. A short religious service is held every day, and any one can go to it; it is held in a place apart and is not in any way obtruded on those who do not wish to go and no one is ever pressed to go.

This is to my mind, as nearly as I can picture it for myself, the ideal sanitarium. The rates are a little high; but not higher than they ought to be considering what the patient gets. And whether or not you accept this ideal sanitarium, I believe that there is to-day a great need and growing demand for better sanitarium treatment in this country.

Westinghouse Building.

THE BASAL PRINCIPLES OF VACCINE THERAPY*

J. G. ADAMI, M.D., F.R.S.
MONTREAL

Perhaps it is as well that the time allotted to me this afternoon only permits that I should, as it were, expose before you the broad ground plan of the territory of vaccine therapy. To criticise adequately but one of the many moot points would in itself occupy more than the given period.

Thus, therefore, in the first place as the main basal principle, it may be laid down that bacterial infection is primarily local and that even when the microbes spread from the primary focus, nay even when a bacteriemia is set up, there still persist tissues of election in which alone those bacteria find conditions for active growth. We may put this otherwise and say that *when bacteria gain entrance to the system they find but a limited opportunity for growth, nay indeed, they are destroyed in, if not by, the majority of the tissues.* Let me afford a familiar instance. Consider the course of a malignant streptococcus endocarditis. The very development of the endocardial lesions demonstrates that the streptococci have been circulating in the blood. Make blood cultures in such a case and without difficulty growths of the streptococci are obtainable. There is no question about the bacteriemia. But in such a case how rare it is to find a true abscess in the spleen, with active proliferation of streptococci in that organ! That the spleen becomes potentially infected is obvious enough; the conditions of the circulation here are just such as to filter and to arrest bacteria brought by the blood; and this organ is one of the seats of election for the arrest of loosened vegetations with their mass of included germs. Infarcts are common enough, but how infrequently do these pass on to true abscess formation! The only conclusion we can reach from this and other cases is that the splenic tissue indifferently destroys the various bacteria brought to the organ and possesses this power to an extraordinary degree. And what is true of the spleen is true also of some of the most widespread and some of the most important tissues of the body. How extraordinarily rare, for instance, it is to find abscesses developing in the skeletal muscles in a case of bacteriemia, or in the liver; or in the brain and cord. In all these tissues the capillary network is so fine that it is impossible that bacteria conveyed by the blood do not become arrested. And here in passing it must be laid down that in the normal animal it is not the circulating blood that itself destroys them. If, as Briscoe has shown, bacteria be introduced into the ventricle of an excised heart, clamped at the auriculo-ventricular groove in such a way as to preclude clotting of the contained blood, then the bacteria undergo little or no destruction on the part of the blood; they are not even taken up by the leucocytes, or more accurately the amount of phagocytosis is minimal. Nor again is it the specific cells of the various tissues to any marked extent that destroy the bacteria, with the exception of the hemolymph system, and I may add as a private heresy, probably the liver. As can be seen by inoculating bacteria into the circulation, killing within a quarter of an hour and making sections of the liver and other organs, those bacteria are actively taken up and destroyed by the endothelial cells lining the capillaries of these organs.

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* The opening address of a Symposium on Vaccine Therapy, at the meeting of the Association of American Physicians, at Washington, May 4, 1910.

This fact, then, that bacterial infection is primarily local carries with it the corollary that *there is a natural or indifferent or non-specific immunity toward most bacteria exhibited in most of the tissues of the organism.* This, it is true, has its limits; it can be overcome by the exhibition (mostly under experimental conditions) of excessive numbers of bacteria, or of smaller numbers of bacteria of exalted virulence, its extent also varies as regards any particular species of bacteria in the different tissues. But I would lay stress on it inasmuch as it has been too much neglected. It fails to be demonstrated by experiments *in vitro* and so is apt to be overlooked, nevertheless, it is of high importance in this matter of vaccine therapy.

It is the existence of this natural and cellular immunity possessed, with the limitations above noted, by most of the tissues of the body in relationship to any specific bacterial form that renders vaccine therapy possible. Time forbids that I should discuss the most interesting and important matter of its relationship to acquired immunity.

The second great underlying principle to be recognized is that once bacteria have established themselves within a given tissue and have undergone proliferation there, that in itself is a sign that that particular tissue is not immune, that the subsequent arrest of their growth is not due to an exaltation of the bactericidal powers of the local tissues, but is due to aid contributed by the organism from without.

This is now-a-days so generally accepted that I need but indicate the main facts on which it is based, namely, the leucocytic invasion of the infected locality on the one hand and on the other the evidence afforded by Bier's treatment that the local proliferation of bacteria is arrested by favoring the inflow of exudate into the part. I would but call attention to Hektoen and Carlson's[1] recent brilliant and convincing demonstration that just as the natural or non-specific immunity is cellular and not humoral, so the antibacterial substances are not elaborated in the blood itself but in the tissues; that the circulating blood to which toxins have been added is rapidly deprived of those toxins and now transfused into another animal of the same species sets up no production of antibodies in that animal, whereas, the original recipient of the toxins, although deprived of its own blood and transfused with that of a third animal, proceeds to develop immune bodies.

These are the two basal principles, but in order to utilize them, and by introducing the specific bacteria, either living or dead, away from the primary focus of the bacterial growth to induce an increased antibacterial reaction on the part of the other tissues, there are certain precautions to be taken and certain subsidiary principles which must be heeded.

DOSAGE

First, as to dosage. The fact that definite fever and malaise may accompany the development of a (to others) insignificant streptococcus papule, say, on the nose—of a local inflammation not yet elevated to the dignity of a pustule, still less to that of a good honest boil—is a clear indication that a minute growth of a not specially virulent microbe may nevertheless induce pronounced general reaction; or otherwise, minute amounts of toxins are capable under natural conditions of setting up a profound systemic response. The fact noted by more than one observer,[2] that the application of a minute quantity of tuberculin to the skin slightly scarified is adequate to induce an inflammatory reaction around tubercles of the iris, shows similarly that incredibly minute amounts of toxin gaining entrance into the circulation can produce effects, even if in this case it be in a tissue that is sensitized.

It must ever be kept in mind that the first serious endeavor to employ vaccine therapy dates not from Wright but from Koch, or even more accurately from Pasteur, although the latter in his method of preventive treatment of rabies sought to intervene during the incubation period rather than during the frank exhibition of the infectious disease. Koch employed at first extracts of old bacterial cultures as a therapeutic agent, so old that they contained the diffused products of dead bacilli; later, what we now are accustomed to speak of as true vaccines, namely the killed bacilli. He did not at first recognize the significance of administering minimal doses. Wright's brilliant recognition of the possibility of guaging the extent of the reaction that follows hetero-inoculation has, I am inclined to think, been of service not so much as affording an accurate index, as in affording a means of demonstrating that the best results are apt to follow inoculation of doses of vaccine so small that they need induce no systemic reaction obvious during the next few hours by ordinary clinical means. We may thus take it as a generally accepted principle that minute rather than massive doses of vaccine are to be employed.

QUALITY OF VACCINE

As to the qualities of vaccine, what is true regarding preventive immunization would seem to apply to their therapeutic employment, namely, that a more effective reaction and surer results are obtained by the employment of minute non-lethal doses of the specific bacteria, than by the exhibition of dead cultures, and by the latter than by injecting the products of bacterial growth. But inasmuch as in a frank infection we cannot consider the resistance of the organism as normal, and as, in conformity with what has already been stated the virulence or non-virulence of a given microbe and given dose of the same is implicitly determined by its action on the normal organism, so in vaccine therapy it is, in general, unwise to employ inoculations of the living bacteria.*

So also, on general principles, it is obvious that when the various strains of not a few bacteria present wide variations in their capacity to induce the production of the various antibodies in the animals of the laboratory, more constant results are to be gained by the employment of what have been termed autogenous vaccines, namely, the dead cultures of the particular strain of pathogenic bacteria causing the infection in, and isolated from the patient rather than laboratory stock cultures. Such vaccines liberating a particular order of toxins and other bacterial products will more surely stimulate the production of just the particular order of antibodies necessary to counteract and destroy the infective micro-organisms.

CASES SUITABLE FOR TREATMENT

Now as to what may be laid down regarding the cases suitable for this means of treatment. We may broadly express the severity of any given case of infectious disease as the difference between the resisting powers of the organism and the virulence of the microorganism. In other words, a like grade of disease is to be anticipated when the resisting powers are considerable and the virulence of the microbe also considerable, and when the bodily resistance is feeble but the virulence of the microbe also feeble. The most hopeless cases of disease belong therefore to the categories of intense virulence of the specific bacteria, and of extreme depression of the systemic resistance. In neither of these cases, whatever indicator we employ, whether we estimate the agglutinins, the bacteriolysins or the opsonins of the blood do we find other than a lowering of our index of systemic reaction. To inoculate vaccines in either order of cases is, not to set up a reaction on the part of tissues that are exhausted or incapable of stimulation, but is merely to increase the amount of toxic material circulating in the blood, and to accelerate the final event.

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[1] Jour. Infect. Dis., 1910, vii, 319.

[2] Emery: Immunity and Specific Therapy, London, 1909, p. 381.

* The only exception that I can call to mind is the most cautious method introduced by Williams and Webb of treatment of tuberculosis by inoculating first either a single lung bacillus, or a very few, accurately counted, and at intervals steadily increasing the dose. This demands technical skill of the highest order.

Thirdly, as to the great mass of intermediate forms. what is to guide us? With Wright we may distinguish between two main groups of cases, those in which the growth of the specific organism within the body is accompanied by a febrile state, and those in which a continued febrile state is wanting, although on occasions rise of temperature may show itself. The febrile state is the sign of diffusion from the foci of growth of the bacterial toxins, and possibly also of the products of local tissue disintegration, and of reaction to the same.

With Wright we accept that the non-febrile cases indicate a limited and confined local growth of the bacteria, under conditions which do not readily permit the infusion of lymph either for the continued nourishment of the bacteria or for the conveyance of antibodies, and which, coincidently, arrest the effusion of toxins and products setting up the general reaction. These conditions may be due to the tissue in which the growth occurs being by nature dense and poorly supplied with vessels, or may be of secondary development, the specific microbes being of a relatively low grade of virulence, so that the tissues immediately surrounding the foci of growth instead of being depressed become stimulated to proliferate, whereby there is developed a surrounding capsule, well seen, for example, in connection with many tuberculous foci.

As we see, I might almost say daily, in the postmortem room, in connection with obsolescent tuberculous foci, this capsule formation may be so dense that in itself it must be regarded as a means of arrest of disease; or otherwise we may reasonably deduce that there can be a grade of self-limiting infection which, as there is no general reaction, is a potential rather than an actual infection, and in which vaccination is, it might seem, unnecessary. All the same, bacteria so fenced in are not absolutely innocuous. Clinical and post-mortem room experience demonstrate that they are apt to be latent and not destroyed. It would seem that hyperemia of the surrounding tissue and increased infusion of lymph may stimulate the bacteria to renewed growth and, whether by leucocytic agency or by necrosis and solution of the capsule, the bacteria may escape and set up active infection. The advantage of vaccination in this order of cases is that it replaces an unprepared by a prepared organism, and that through the sensitization of the immediately surrounding tissue it induces a very definite grade of hyperemia and leucocytic infiltration of that tissue, which, if the encapsulation is not too dense, must favor the entrance into the focus of antibacterial agencies; its disadvantages is that owing to the process of encapsulment the prepared lymph and leucocytes percolate with difficulty into the focus and thus are apt to be presented in quantities insufficient to bring about bacterial destruction. Vaccination alone in this stage does not surely bring about cure. What is necessary is the employment of auxiliary methods promoting the freer flushing of the focus or foci with antibacterial lymph as by Bier's methods for inducing hyperemia or Paterson's method of graduated exercise.

Why, it may be asked, do I categorically lay down here that the lymph is the important agent It may well be urged in objection, that, owing to the contradictory results obtained by different observers, one is not justified in concluding that the blood plasma and lymph, as contrasted with blood serum *in vitro,* possess either antibacterial or opsonizing properties, whereas, on the contrary Metchnikoff has proved to the hilt that the leucocytes of an immunized animal possess far more active phagocytic properties than those of the non-immunized. Quite so. But this is to me a very striking fact that neither Metchnikoff nor any of his school have succeeded in proving that the leucocytes of the immunized animal *per se*— the leucocytes separated from the plasma have greater phagocytic powers than those of the non-immune animal. And, this being so, we must hold as the simplest explanation that without the influence of the immune plasma or lymph the leucocytes are relatively inactive. Nor is it an adequate argument to urge that the leucocytes after centrifugalization and washing are depressed in their functions when placed in normal salt solution, if those same leucocytes transferred to serum will take up a score or more bacilli in a quarter of an hour. My colleague, Dr. Meakins, permits me to quote a yet more effective demonstration of this fact, repeatedly made by him, namely, the leucocytes of a highly immune animal placed in non-immune, normal serum do not take up any greater number of bacteria than do the leucocytes of a normal animal placed in the same serum.

We come now to the consideration of those cases in which the diffusion of bacterial products from the foci of growth has already caused a reaction on the part of the organism. Can we vaccinate with impunity in these cases—in the course of typhoid, pneumonia, and other acute diseases attended by manifest fever? Is there not the danger of adding to the amount of circulating toxins, and thereby exhausting the distant tissues—lymphoid, vascular endothelial tissue or what not—rather than the benefit of stimulating them to produce additional antibodies? Here I am inclined to lay down that the fatal event in the majority of severe infections is not brought about by exhaustion of the tissues in general, but by action of the circulating toxins on the medullary nerve centers, and that the sign of exhaustion of the tissues or paralysis of the same and inadequate reaction on their part is a lowering and not a rise of the body temperature. Thus in the first place it may be laid down that, to guard against excessive action on the nerve centers, *vaccination should never be directly into the blood stream but should be subcutaneous,* allowing a slow percolation of the added bacterial products into the lymph and blood; and, in the second place, that the febrile temperature as such is the evidence of capacity on the part of the tissue to react. This may, I think, safely be laid down that on the one hand a sinking temperature accompanied by increased weakness of pulse and respiration and advancing "toxic" state is a clear signal that the reactive powers of the patient are being overcome and exhausted, so that vaccination can only be harmful, and on the other hand if the fever be somewhat high, provided that the pulse is steady with no signs of cardiac weakness, then vaccination may safely be undertaken. The good results obtainable in these cases can no longer be questioned, and what is interesting is that the system evidently benefits from the slight temporary added rise of temperature which shows itself during the six hours or so immediately following the vaccination.[3] Hyperpyrexia is a contraindication.

Time forbids me to do more than note the curious paradox that often such vaccination converts a disease like typhoid that ordinarily recovers by lysis into one recovering by crisis, and *vice versa* time and again causes a disease like pneumonia culminating in crisis into one healing by a relatively slow but favorable lysis. I can only emphasize that the physician must be prepared for these modifications of the normal course of disease.

THE OPSONIC INDEX

In conclusion there remains to be noted what Wright—and rightly—made the guiding principle in the development of his methods of vaccine therapy, namely, the establishment of an index whereby to determine the effects and course of the subsequent reaction. This was a notable advance. Nevertheless, serviceable as it has been in establishing vaccine therapy as a rational procedure and in determining both the intervals that should elapse between vaccinations and the augmentation of successive doses, it has to be admitted that Wright's index is faulty. The principle is all important, the means of *application of the same imperfect.* When two of the leading experts in London working with samples of the same blood taken before and after vaccination can report, the one that the index is raised, the other that it is lowered, by the process,[4] when, as pointed out by Meakins,[5] a given serum may afford a higher opsonic index when it is diluted than when it is undiluted, and when, as noted by more than one observer,[2] during a long and continued negative phase, which according to Wright is a danger signal, the patient may obviously be making rapid improvement, something must be wrong. The dilution method introduced by Neufeld and Hüne[6] and employed on this continent by Klien,[7] Meakins[5] and Hektoen[1] clearly reduces the error of the personal equation, and, giving a vastly greater cale of the same order as that employed for the estimaion of agglutinins and lysins, permits a comparison to be made between the opsonins and other antibodies of the erum. But if Wright's method is laborious and time consuming, this is more so. The only practical course to recommend is that, in connection with each particular infection that it is sought to treat, the observer first studies thoroughly the variations in the opsonic and other indices in a series of cases, while carefully observing the effects of the vaccination treatment at the bedside, and then, armed with this foundation knowledge of the results of different strengths of doses in the different orders of cases, he educates himself to depend more and more on clinical symptoms in determining the strength and the frequency of his inoculations. Thus as shown by Latham[8] and by Hort,[4] it is possible in tuberculosis to read a temperature chart in terms of an immunity curve, the latter employing not the daily variation but joining the evening temperatures into a continuous curve.

In short vaccine therapy to be a success must be undertaken, not by the busy consultant, nor again by the confirmed habitué of the laboratory, but must be placed in the charge of one who, combining a thorough laboratory training with a certain amount of time not consecrated to other engagements, and a recognition that his future field lies in clinical medicine, accepts gladly the opportunity here afforded to apply his technical knowledge and to make intimate studies of individual cases of disease. Vaccine therapy lies in the hands of those younger well trained physicians whom happily the foremost schools of this continent are producing in increasing numbers.

Thus as a final principle it may be laid down—and I do this with full sense of the necessity and of the responsibility that attaches thereto—that vaccine therapy is not to be undertaken by the ordinary practitioner; there are too many dangers attaching thereto; and with this the corollary that, excellent as may be the stock vaccines prepared by certain firms, to advertise these lightheartedly and recommend them and their employment far and wide deserves the condemnation of this Association and of all interested in the well being of their fellow men.

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[3] A rise which, it is interesting to note, is wanting in the class of limited infections already discussed, and is suggestive of increased sensitiveness of the tissues already stimulated by the circulating toxins discharged from the infected focus.

[4] Hort, E. C.: Rational Immunization in the Treatment of Pulmonary Tuberculosis, London, 1909; and Brit. Med. Jour., Feb. 13, 1909.

[5] Jour. Exper. Med., 1909, xi, 100.

[6] Arb. a. d. Kais. Gesundheitsamte, 1907, xxv, 164.

[7] Johns Hopkins Hosp. Bull., 1907, xviii, 245.

[8] Proc. Roy. Soc. Med., Med. Sect., April 1, 1909.

THE EPIDEMIOLOGY OF POLIOMYELITIS

A PLEA THAT IT MAY BE CONSIDERED A REPORTABLE QUARANTINABLE DISEASE*

JOSEPH COLLINS, M.D.
Physician to the Neurological Institute
NEW YORK

Half a century has elapsed since Heine published the first known description of the disease which is now commonly called anterior poliomyelitis, or as he designated it, spinal infantile paralysis. Half a century is an extremely short time for a disease so hideous and uncompromising to hide the secret of its being; it might have done so much longer had it not been for the ghastly epidemic that occurred in New York in 1907, which permitted Flexner to initiate the experiments from which has flown his brilliant discovery of its cause.

EPIDEMICS

Poliomyelitis has prevailed epidemically in many parts of the world during the past twenty-five years. The great epidemics have been, that of Norway in 1887 and 1895; 43 cases in the first, and 20 in the second, recorded by Medin; that of Rutland, Vermont, in 1894; 126 cases, recorded by Caverly; that of Queensland in 1904, 108 cases, recorded by Ham; that of northern Norway in 1905, 437 cases, and of southern Norway in the same year, 103 cases, recorded by Wickman; that of Vienna in 1908, 266 cases, recorded by Zappert; that of Wisconsin in 1908, 352 cases, recorded by Manning; that of Rhenish Westphalia in 1909, 500 cases recorded by Rekzheh, Krause and others; and the New York epidemic in 1907, 2,500 cases, recorded by a collective investigation committee in 1909.

In 1908 Holt and Bartlett[1] collected the literature of thirty-five epidemics which had occurred prior to the year 1907. Since that time about twenty epidemics, large and small, have been reported. Reference to the literature of these latter epidemics are appended to this article. The literature of the early epidemics will be found in the article by Holt and Bartlett.

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* Read before the Association of American Physicians, May 2, 1910.

[1] Amer. Jour. Med. Sc., 1908, lxxxv, 647.

The large number of cases in the recent epidemics indicate that many cases formerly diagnosticated as grip, rheumatism, neuritis, bulbar paralysis, etc., are now recognized to be clinical varieties of poliomyelitis. It is the signal service of Wickman to have emphasized the various clinical forms under which the disease may display itself.

A NEW DISEASE

The most remarkable secular mutation of poliomyelitis is that it is apparently a new disease. So far, nothing has been found in the literature to indicate that previous to 1843 the disease existed. In that year Colmer published[2] the report of a case of infantile hemiplegia that he had seen in West Feliciana, Louisiana, and brief mention of ten other cases of various forms of paralysis occurring in children which were probably dependent on poliomyelitis. It is worthy of remark that cerebrospinal meningitis escaped recognition up to the year 1834. The unheralded advent of a disease of which no trace has been met in history, is not uncommon. The English sweating sickness made its appearance abruptly in 1486, and disappeared with equal abruptness in 1551.

Because of the short time that we have been familiar with epidemic poliomyelitis we are unable to say whether or not it is subject to the alternating periods of quiescence and recrudescence that are so common in other epidemic diseases. In this country it has not prevailed epidemically twice in the same place, unless the mild epidemic of 1909 in that portion of Brooklyn known as East New York may be so considered, nor can we say that it displays conspicuous multiannual nutations, to use Ransome's designation for fluctuations in prevalence and virulence extending over periods of from ten to fifty years. Poliomyelitis may be constantly more or less existent in a densely populated large city such as New York, but its existence is known only to individuals who may come in contact with it. When the disease shall be put on the list of reportable diseases, then it can be determined what its multiannual fluctuations are. One fact that is worthy of attention, is that during the epidemic of 1907 in New York, the death rate from other epidemic diseases was not lower than it usually is. This is contrary to what has been noted in other epidemic diseases. For instance, when scarlet fever prevails, the death rate of measles is apt to be low and *vice versa.*

SEASONAL OCCURRENCE

The most remarkable thing in the epidemicity of poliomyelitis is its seasonal occurrence. It occurs as invariably in the summer months as smallpox does in the winter months, and the advent of cold weather seems to terminate epidemics in every instance. One may readily draw the inference from this, that cold is inimical to the saprophytic growth of the non-obligatory parasite, but to make such inference legitimate, it would first have to be proved that the virus is parasitic in nature. In several instances it has been noted that the summers have been particularly dry. The only exceptions to this are a small epidemic reported by Litchfield, of Sydney, who notes that the summer was wetter and cooler than usual, and one in San Francisco in May and June, 1901, reported by Woods,[3] in which there were fifty-five cases.

COMMUNICABILITY

The next most interesting feature of epidemic poliomyelitis is its communicability. Until recently it has been a matter of personal opinion whether or not the disease was communicable. Those who have reported epidemics have expressed their conviction that the disease was probably contagious and such occurrence as that reported by Pasteur,[4] in which seven cases occurred in one family, seemed to leave no doubt of the contagiousness of the disease. The description of an extensive epidemic in Stockholm in the summer of 1899, in which in various houses two cases of the disease occurred, and in several families, in which two or three cases were observed amongst relatives who had had contact with the sick, went far to corroborate this belief, and when Geirsvold was able to trace the disease from one village to another, and from one house to another, the contagiousness of the infection began to be realized. Since the publication by Wickman[5] of the epidemic which occurred in the summer of 1905 in southern Norway, the contagiousness of the disease has been admitted. In the majority of instances some contact could be traced between one patient and another, and even the spread of the disease from one village to another could be traced by the passage of the individuals from town to town.

The most remarkable contribution to the study of its contagiousness, however, has been made in our own country by Dr. George P. Shidler,[6] of York, Nebraska. Dr. Shidler seemed somewhat in doubt whether the spinal disease which prevailed epidemically in York county in July, 1909, was poliomyelitis or cerebrospinal meningitis, but there can be no doubt that it was the former. Some of his cases are most illuminating in showing the contagiousness of the disease. For instance, a woman went with her child to the wedding of a sister in whose house a younger sister was ill with the disease; nine days afterward the mother, with the child, returned to her own home another of her children came down with the disease. In an adjoining house there lived a family of six children; all of them developed the disease; a woman who came to visit this family brought her baby; in five days it died of the disease. Soon after this, quarantine was established, and the disease was checked. A number of other instances quite as striking as this are published, but the most important contribution to the epidemiology of the disease, is the number of cases that occurred in families in which there were two or more children, all of whom acquired the disease. There were six cases in a family of six children; four cases in a family of six, four cases in a family of five, four cases in a family of four.

Contact with a person sick of the disease is not necessary that another person may contract it. There are numerous examples of contagion by indirect contact; that is, a person who does not have the disease carries it from a victim of the disease to another at a distance, who then falls ill of it. This has been established by the record of several epidemics, but by none more strikingly than those reported by Wickman and by Shidler.

INCUBATION, DISTRIBUTION AND MORTALITY

The period of incubation may be as brief as four days, or it may be a fortnight. From a study of their publications alone, it must be accepted that poliomyelitis

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[2] Colmer: Amer. Jour. Med. Sc., 1843.

[3] Occidental Med. Times, xvii, 77.

[4] Pasteur: Tr. Clin. Soc., 1897, p. 143; Taylor, J. M.: Philadelphia Med. Jour., Jan. 28, 1898; Neumark: Med. News, Jan. 28, 1899; Geirsvold: Norsk Mag. f. Laegevidensk, 1905, p. 1280.

[5] Wickman: Beitrage zur Kenntnis der Heine-Medinchen Krankheit, Karger, Berlin, 1907.

[6] Shidler, George P.: The Epidemic of Spinal Disease in Nebraska, The Journal A. M. A., Jan. 22, 1910, liv, 277.

STATISTICS OF EPIDEMICS

Year and Season.	Locality.	Topography and Hygienic Surroundings.	Number of Cases.	Deaths.	More Than One Case in Family.	Author.	References.	Remarks.
1907 Summer and early autumn.	Sweden.	Towns and country.	100 in the epidemic of '05, 50 in '06.	159 corrected mortality. 16.7%.	Many examples.	Wickman	Beiträge zur Kenntnis der Heine-Med. Krankheit, Berlin, 1907.	The most complete presentation of the subject extant.
1907 Summer.....	Pennsylvania. Ridgway......	County—good....	50	4	No...........	Terriberry....	Long Island Med. Jour., Dec. 1907.	The disease extended down the valley in a definite direction.
1907 Summer.....	Michigan. Oceana Co....	....	20	Not given.	No...........	Griffin........	Jour. Michigan State Soc., Feb., 1908.	Meningeal symptoms were common. Pigs and chickens also affected.
1907 Summer.....	Pennsylvania. Dubois.......	County and village.	100	A few.....	....	Free..........	Jour. Nerv. and Ment. Dis., Apr., 1908, a brief abstract of paper read before the Phila. Neurological Soc.	
1907 Summer.....	Wisconsin. Galesville....	Rural............	22	....	....	Jegi	Wisconsin Med. Jour., Apr., 1909.	
1908 August to October.	Wisconsin.	Bad sanitation and sewerage; surface wells in marsh and near privy.	352 in the state. 167 in Eau Claire County.	54	....	Manning......	Wisconsin Med. Journal, April, 1909.	29 cases followed direct exposure to infection; 25 cases immediately after a case in same house; 2 in houses where disease prevailed 3 and 20 years before.
1908 Summer.....	Minnesota. Moose Lake, Barnum, Wadena.	Rural............	....	....	In 1 family of 6 children, 5 ill; 2 died, 3 recovered; another of 5 children, 3 ill, 1 died.	Hamilton	Wis. Med. Journal, April, 1909; Northwestern Lancet, Minnesota, Oct., 1909.	Disease assumed type of neuritis; several patients had tonsillitis.
1908 Summer.....	Michigan. Flint.........	Rural and village.	30	5	One family: 2 little girls within a week.	Manwaring ..	Jour. Michigan State Med. Soc., April, 1909.	
1908 Hot, dusty weather.	Minnesota.	Good hygienic surroundings.	....	....	A few cases only; no isolation of any cases.	Hill	Northwestern Lancet, Sept. 1, 1909.	No evidence of the transmission of the disease from person to person or through infected houses or water, or by animals or by dirt-eating (common among children eating raw vegetables direct from the garden).
1908 April-June after dry weather.	Australia. Victoria......	Densely populated districts; sanitation fair.	137	6	Majority of cases in families where 3 or 4 slept in same room or same bed.	Stephens.....	Intercolonial Med. Jour. Australasia, Nov. 20, 1908.	No severe pain in disease. Incubation period 3 to 16 days. Invasion, 0 to 7 days.
1908 July to September.	Minnesota. Northfield....	....	20	4	4 in 1 family; 3 in another; 2 in another.	Strang........	Jr. Minn. State Med. Assn. and Northw. Lancet, July 1, 1909.	
1908 June to September.	Virginia. Salem........	Town and vicinity.	25	3	No 2 cases in 1 family, even when other children were exposed.	Wiley and Darden.	THE JOURNAL A. M. A., Feb. 20, 1909.	Cool weather interrupted epidemic for 3 weeks; then hot weather brought on 2 new cases in August. Patients had pronounced hyperesthesia and sweating.
1908 June to September.	Massachusetts. Western part.	3 contiguous and 11 neighboring towns, on banks of streams; detached houses, no sewers in majority of houses. Sanitation not good.	69	5	2 cousins in same house, 2 brothers in a family, 2 cousins in another, 2 brothers in another, 2 sisters in another.	Lovett and Emerson.	Monthly Bul. Massachusetts State Board of Health, July, 1909.	All patients were exposed to valley influences. No correlations to curves of the temperature, rainfall and number of cases. Two to three times the number of children sick were exposed and did not become ill. Six patients over age of 17.
1908 Summer.....	Westphalia. Hagen........	Not remarkable. (See note.)	100	Not stated: 9 autopsies.	....	Krause.......	Deutsch med. Wochenschrift, Oct. 21, 1909.	Great mortality among chickens. Shoots of small oaks covered with white fungus.
1908 Summer.....	Vienna and Lower Austria.	Ordinary; not bad.	266	....	....	Zappert......	Wiener med. Wochenschrift, Nov. 13, 1909.	
1908 Summer.....	New York. Schenectady.	Good............	29	....	....	Clowe........	Albany Medical Journal, vol. 19, 1908.	
1908 Summer.....	Germany. Marburg.	....	50	....	....	Romer and Muller.	Münchener med. Wochenschrift, Dec. 7, '09; ditto, Nov. 30, 1909.	Sore throats extremely common. Many examples of communicability from person to person.
1908 Summer.....	Pennsylvania. Lewiston.....	....	30	3	Two	Barnett	Therap. Gazette, Sept., 1909.	
1908 Summer.....	England. Essex	....	8	None......	Three and two.	Trevis........	Brain, Nov., '09.	Could not trace spread of disease.
1909 Summer and autumn.	Rhenish Westphalia.	....	500	18.2 in 1 vicinity.	....	Rekzeh.......	Med. Klin.. 1909. No. 45, p. 1704.	It followed an outbreak of acute poliomyositis.
1908 Summer.....	Russia.	Not remarkable.	49	....	Several instances.	Schwarz......	St. Petersburg Med. Wochenschrift, Jan. 10, 1909.	In a village of 500 inhabitants.
1909 Summer.....	Nebraska. York County.	Hygienic surroundings good—fair.	200	15 =7.5%	Over 1 in family; 44% occurred in families with more than 2 children, all of whom took the disease.	Shidler.......	THE JOURNAL A. M. A., Jan. 22, 1910.	Shows the necessity of having epidemics properly studied. Perhaps the most important on record. The report is unfortunately fragmentary.

is a contagious disease. That its contagiousness varies needs scarcely be said. In the New York epidemic, the most extensive on record, the only evidence of its contagiousness was that there were two or three cases in a few families, but the most painstaking care to detect any evidence of its communicability was unrewarded.

The territorial distribution of some of the epidemics is noteworthy, especially the epidemic of Sweden in 1905. Although the disease was pretty generally distributed through the entire country, there were well-marked foci in which the disease was prevalent to a considerable extent, or to a slight extent, and the large intermediary areas in which the disease did not exist. This has been noted in several other instances, but in the New York epidemic there certainly were no foci of the disease. The disease has no apparent relationship to density of population.

The next most important fact obtainable from a study of these epidemics is that the mortality rate varies very decidedly in different epidemics. In some it is as low as 5 per cent., in others it is nearly 20 per cent. (the highest ever recorded was in an epidemic in Sweden in which the death rate was 46 per cent.) The former figures approximate the death rate in the New York epidemic, the latter that in York county, Nebraska.

INFLUENCE OF SURROUNDINGS

The most careful investigations have failed to reveal that the epidemic prevalence of the disease has anything to do with unhygienic surroundings. To be sure, in some instances it was noted that the sanitary conditions were poor, especially in some of the epidemics of Norway, (Geirsvold) but in the majority of the large epidemics such as those of Vermont, New York, Nebraska, Australia, and Westphalia, the hygienic conditions were good, and in some instances excellent.

The association of poliomyelitis occurring epidemically with other diseases has been made a rather important feature by many writers, and there are in the literature a number of cases showing such association. As a matter of fact it has no noteworthy relationship to infectious diseases. In several instances there was a great mortality among chickens (Caverly, Krause) and the latter writer made the interesting observation that the shoots of small oak trees surrounding a house in which several cases occurred were noted to be covered with white fungus. This disease of the young oak shoots had only existed for a short time. This author also observes that there was a great number of cases among breast-fed children, and a number of writers point out that disorders of the digestive organs were very common. Personally, I made a close study of this question in the several hundred cases that I saw in the New York epidemic, and the conclusion that I drew was that digestive disturbances had no relation to the occurrence of the disease.

RECRUDESCENCE

A very remarkable fact was noted by Stephens[7] that there was a recurrence or recrudescence of the disease occasionally observed in the same child. Dr. A. A. Eshner thinks that he has observed a second attack of poliomyelitis in the same patient. It is most probable, however, that one attack of poliomyelitis gives immunity for a long time.

MODE OF INFECTION

We need no longer conjecture whether or not the disease is contagious. The points for our consideration are; what the spreading powers of the virus are, and what the facilities are for the spread of the contagion, and how does it gain entrance to the system. Spreading powers of the virus vary unquestionably with the epidemics. In some cases apparently it is impossible to make it out, and in other cases, as in the Nebraska epidemic and in the Westphalia epidemic, the spreading powers of the virus were commensurate with social contact, and the facilities for the spread of the contagion depend on such contact. From a study of the disease clinically, no information has been obtained as to how the virus gains entrance into the system. From experiments on monkeys, however, Flexner is convinced that the portal is the same as in epidemic cerebrospinal meningitis, namely the nasopharynx. The necessity of adopting measures to keep this mucous membrane in a state inimical to infection in children of a community in which the disease is prevailing is obvious. The period of incubation is from five to ten days. It may be longer in some instances, and quarantine for a fortnight or longer would seem to be proper.

NEED OF QUARANTINE

Boards of health should be urged at once to place poliomyelitis on the list of reportable diseases and to formulate measures which may be quickly enforced to constitute the strictest quarantine. Although the death-rate is comparatively low in some epidemics, it is apparently high in others, and our utter inability to influence the disease after it has begun, in conjunction with the fact that it maims the vast majority of those that survive it, should spur us to every effort, individually and concertedly, to stamp out the ghastly disease. That quarantine shall be of real value we must learn to detect the so-called atypical cases, particularly the "meningeal" cases, and those in which paralysis does not occur.

PATHOLOGY AND DIAGNOSIS

We must forget the description of the text-books and realize that poliomyelitis is an acute infectious disease of the cerebrospinal axis and its covering, the pia, with a pronounced and inexplicable predilection for the gray matter of the anterior portion of the spinal cord, which it nearly always succeeds in affecting before its pathogenic impetus is satisfied. But it affects the gray matter in one case profoundly; in the other triflingly, and the symptoms that result must of necessity vary with the intensity of this affection and with the portion of the cerebrospinal axis that bears the brunt of the lesion.

We must also learn to diagnosticate the disease early, a task more difficult than the interpretation of the so-called atypical cases. It has been recently suggested by Flexner (verbal communication in the discussion of this paper) that in view of the frequency of a degree of leptomeningitis in perhaps the majority of cases, the spinal fluid withdrawn early in many of these cases will show an increase of proteids and changes in the lymphocytes which will suggest the diagnosis before the disease has an opportunity to attack the cord itself. We might legitimately entertain the hope from our knowledge of the diffusion of formaldehyde within the system that soon we may be in possession of a substance which will be adequate to check the progress of the disease.

37 West Fifty-fourth Street.

Strangulated Ovarian Tumor in a Child.—*J. M. G. Swainson* (*Proc. Roy. Soc. Med.*, February, 1910) reports the case of a child aged 2, brought to the hospital with acute abdominal symptoms, pain and vomiting of four days' duration. The abdomen was rigid, somewhat distended, and the temperature was 100.4 F. A tumor was felt in the right iliac fossa. Operation revealed a strangulated ovarian tumor about the size of a tangerine orange and greyish black in color. The other ovary was normal.

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[7] Stephens: Intercolonial Med. Jour. of Australasia, xiii, 1908.

PARALYSIS OF THE NECK AND DIAPHRAGM IN POLIOMYELITIS*

IRVING M. SNOW, M.D.
Clinical Professor of Diseases of Children, Medical Department, University of Buffalo.
BUFFALO, N. Y.

The knowledge of the nature and symptoms of poliomyelitis has expanded enormously within the last five years. New ideas of the communicability and pathology of the disease have been accepted. Landry's paralysis, polio-encephalitis, and various painful paralyses are now included in one disease-concept. It is therefore with the hope that an unusual symptom-complex of poliomyelitis may find a place in the literature of the disease that I report a case of high cervical poliomyelitis causing a paralysis of the diaphragm and neck muscles and terminating in complete recovery.

The existing literature on this subject is very scanty.

Neck paralysis in combination with loss of power in the extremities is not unusual; on the contrary, isolated neck palsies are excessively rare in poliomyelitis.

Paralysis of the diaphragm is scarcely mentioned in treatises on poliomyelitis except with the fatal type of Landry's paralysis.

There is but one recorded case (Erb's[1]) of a combined paralysis of the phrenic and spinal accessory nerves existing as the sole lesions of a high cervical poliomyelitis. The origins of the spinal accessory and phrenic nerves are close together on the upper cervical cord. The spinal branch of the spinal accessory originates in the anterior horn of the cord, as low as the sixth cervical nerve. It is simply a motor spinal nerve which has the unusual course of ascending into the skull and of leaving it again with a cranial nerve. In the neck the spinal accessory inosculates with the second, third and fourth cervical nerves and forms a plexus which innervates the sternomastoid and the trapezius muscles.

The phrenic nerve—4th cervical-nerve—arises from about the same tissue and innervates the diaphragm. Thus the two pairs of nerves originate in about the same area of spinal gray matter, and a focus of inflammation in the cervical cord might easily injure the functions of both phrenic and spinal accessory nerves.

The rarity of paralysis of the phrenic nerve may be due to the resisting power of its tissues to disease.

With paralysis of the neck muscles the symptoms are characteristic. The patient cannot rotate the head, hold it erect or raise it from the pillow. In sitting or standing, the head falls forward, backward and sidewise, not following the movements of the body; the head wabbles around on the body like the headpiece of a disabled marionette.

In Wickman's analysis[2] of the distribution of paralysis in the Swedish epidemic of poliomyelitis in 1905 with 479 cases, neck paralysis existed in nine patients. This does not include cases described as Landry's paralysis or paralysis of respiration, or cases of ascending paralysis in which all four extremities and the neck were paralyzed before the fatal issue. Thus, palsy of the neck muscles occurred in 1.9 per cent. of cases of the benign type of the disease; in only one case was there an isolated palsy of the neck. With the others loss of power in the neck was associated with paralysis of the extremities.

From the report[3] of the Collective Investigation Committee of the New York epidemic of poliomyelitis of 1907, one would conclude that loss of power in the neck is common. In 679 cases loss of motion in the neck occurred as the first symptoms in two instances, and at the height of the disease 299 patients (39.8 per cent.) could not hold up their heads. As to this symptom both the questions of the committee and the resulting answers are vague as to whether the inability of the patient to raise his head came from general prostration or from paresis of the sternomastoid and trapezius; yet a fair conclusion is that in a considerable number of cases there existed a motor palsy of the neck.

It is interesting to note that the committee made an analysis of the residual disability in 318 cases in the same epidemic of poliomyelitis and no mention is made of a neck palsy, so that one may draw the conclusion that this symptom generally disappears. That with the neck paralysis of poliomyelitis a complete recovery generally follows may also be inferred from the last edition of Starr.[4]

In an analysis of 1,292 permanent palsies from poliomyelitis collected from the statistics of Starr, Duchenne, Seligmuller, Sinkler, Lovett, no paralysis of the neck is recorded. Starr, however, states that during the disease, the neck muscles are occasionally weak and that the paralysis may extend to the neck, throat, face and even the eyes, giving rise to the symptoms of bulbar palsy, the polio-encephalitis inferior and superior of Wernicke.

Oppenheim and Zappert[5] do not mention paralysis of the neck or diaphragm in their articles on poliomyelitis.

Fetra[6] states that in 63 cases rigidity of the neck existed in eleven cases and a paralysis of the neck and larynx in one case.

Buzzard[7] says that in poliomyelitis there is occasionally a rapid atrophic paralysis of the muscles of the head and trunk; and Holmes states that paralysis of the diaphragm is in the majority of cases only part of a general peripheral neuritis or poliomyelitis.

PARALYSIS OF THE DIAPHRAGM—PHRENIC NERVE

Wickman[8] says that the pathologic disturbances of the mechanism of respiration in poliomyelitis are partly due to an affection of the spinal center of the intercostal muscles and diaphragm, and partly to a lesion of the origin of the vagus nerve. It is not always possible to distinguish whether the respiratory distress comes from a high cervical or a pontine source. An injury to the pneumogastric of medullary origin usually shows itself by recurring attacks of dyspnea and tachycardia.

With an isolated bilateral paralysis of the diaphragm the symptoms are usually very clear. The respiratory abdominal movements are the reverse of normal. In health during inspiration the abdominal viscera are depressed and the abdomen is protruded. With a diaphragmatic palsy the upper abdomen recedes during inspiration and is pushed out during expiration. Breathing is labored and difficult. Any effort causes cyanosis and dyspnea. The lungs are nevertheless clear of pathologic sounds. The prognosis is always serious, partly from the danger of pulmonary infection, and is especially grave if associated with bulbar symptoms. If the paralysis of the diaphragm is complicated with a loss of power of the intercostal muscles the patient will probably suffocate. This danger is greatest in the first week, after which time the outlook improves.

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*Owing to lack of space, this article is here abbreviated by the omission of citations from the literature of the subject. The complete article may be found in the author's reprints.

[1] Erb: Deutsch. med. Wchnschr., 1906, p. 1899.

[2] Wickman: Heine-Medinschen Krankheit, pp. 139-276.

[3] Report of the Collective Investigation Committee on the New York Epidemic, 1907, p. 45.

[4] Starr, M. Allen: Diseases of the Nervous System, 1908, p. 270.

[5] Pfaundler & Schlossman: Diseases of Children, iv, p. 172.

[6] LaFetra: Trans. Am. Pediat. Soc., 1908, p. 164.

[7] In Osler's Modern Medicine, vii, 258.

[8] Wickman: Heine-Medinschen Krankheit, p. 34.

REPORT OF CASE

The history of my case of cervical poliomyelitis causing paralysis of the neck and diaphragm is as follows:

Patient.—John D. was a boy of 4, a patient of Dr. Villiaume. Previous to his illness a baby brother, breast-fed, had sickened August 29 with fever, vomiting, diarrhea and general tenderness and died in a few days; and a cousin, also in the same house was attacked with symptoms of meningitis and taken to Ohio. Both these were probably cases of poliomyelitis spreading by direct contagion. John D. sickened September 4, with pain and tenderness in the limbs, trunk and neck, vomiting, fever, 104, pulse 150, and retention of urine. Later the pain and tenderness lessened, but there was still soreness and muscular twitching in the limbs, and in a day or two a flaccid palsy developed in the muscles of the neck. There were no convulsions; the boy was slightly delirious at times.

Examination.—I saw the patient first September 8, the fifth day of the disease. He was a well-developed boy, lying in a reclining chair, breathing with great difficulty. The pulse was 110, regular; respiration 42. The lungs were clear; there was a complete paralysis of the neck muscles so that the patient had no control of his head. The head fell backward and forward and sidewise unless held with the hands or resting on a pillow. The neck was not tender. Its muscles did not respond to the galvanic or faradic current. Evidently there was present a paralysis of both spinal accessory nerves injuring the function of the sternomastoid and trapezius muscles. Most of the child's distress arose from difficulty in breathing. The whole chest moved with great effort during respiration. With inspiration there was slight recession of the anterior ribs and the upper abdomen was drawn in; it bulged out at expiration, indicating a bilateral paralysis of the diaphragm. The right knee-jerk was absent, the left normal; sensation was normal.

Course of Disease.—In the evening there developed great cardiac depression, rapid pulse and intense dyspnea, giving rise to the fear that the myelitis had invaded the medullary tract. This distress passed away in a few hours. After this for ten days the child remained in stationary condition and was fairly comfortable except that the respiration was labored and rapid and that the neck muscles were useless.

September 17: Fourteenth day of illness. Dr. James W. Putnam in consultation. There was no fever; respirations 40, pulse 120 to 140. The face was often flushed; the pupils were evenly dilated; the lungs were clear; the heart sounds good. The neck muscles were still paralyzed; did not respond to faradism. The abdominal muscles responded to faradic current; the upper abdomen receded at inspiration. Evidently the condition was due to a high cervical poliomyelitis affecting a focus at the origin of both pairs of phrenic and spinal accessory nerves.

October 21: Forty-seventh day of illness. There had been general improvement since last mentioned date. Respirations were 31; pulse 96. Both knee-jerks were lost. Respiration was easy and normal. The abdomen bulged at inspiration; the abdominal reflexes were good on both sides. The head could be moved rather feebly from side to side and also drawn forwards. The sternomastoid was partly restored. The head could not be moved backwards. There was no power in the trapezius; all the neck muscles wasted and flabby; all twitch with the galvanic current.

The paralysis of the diaphragm began to improve after the third week and had disappeared by the sixth week. The child improved rapidly in health. A jury-mast support enabled him to support his head. About March 1 the jury-mast support was discarded and the child played about without artificial support to his head. All of the muscles of the neck could be moved, although the sternomastoid was still somewhat weak. There was no apparent wasting of any muscle. The course of the disease showed that the myelitis affected a small focus in the cervical cord between the third and sixth cervical nerves, temporarily destroying the function of both phrenic and spinal accessory nerves; the lesion about the phrenic nerve caused a severe but temporary disturbance of respiration. The paralysis of the neck muscles lasted about four months, after which time both sternomastoid and trapezius recovered their power.

The treatment—protection from chill and respiratory infections, rest, diet, strychnin, electricity—was skilfully carried out by Dr. Edward Villiaume.

CONCLUSIONS

From the meager literature of paralysis of the neck and diaphragm in poliomyelitis I would draw the following conclusions:

1. Cervical poliomyelitis affecting only the origins of the phrenic and spinal accessory nerves is rare, but in the two recorded cases recovery occurred.
2. Paralysis of the neck muscles occasionally occurs in poliomyelitis and except in Landry's paralysis the prognosis is favorable as to restoration of function; some improvement always takes place.
3. Paralysis of the diaphragm is exceptionally seen in poliomyelitis and that, although dangerous, recovery is possible.

476 Franklin Street.

THE PROBLEMS OF THE PHYSICIAN CONCERNING THE CRIMINAL INSANE AND BORDERLAND CASES

ADOLF MEYER, M.D.
NEW YORK

The usual way to learn about diseases is to take up individual cases and to determine what specific matters stand out in the experiment of nature, and what special things shall be formulated into a plan of treatment or management.

When a whole field like that of psychiatry and its legal aspects in criminal cases is to be the starting point, one likes to take for granted a considerable experience with specific cases of the disorders to be subjected to such a special inquiry. But I do believe that even a general discussion of the general topic is bound to throw some light on how to become better acquainted with such a class of people as the insane.

At the very outset the problem appears rather different to the physician from what it appears to-day to the layman. The layman, and I am afraid most lawyers, consider insanity as a condition characterizing a more or less final subdivision of humanity, which is, or should be, fenced in by asylum walls. Asylum walls have indeed long been the most impressive and most intelligible definition of the whole group. Our text-books of mental diseases have up to recently been to a remarkable extent descriptions of what belongs in asylums, very careful of making their distinctions in the traditional terminology of mania, melancholia, paranoia and the terminal and senile and paralytic dementias. To make my first point as briefly as possible: Insanity is not a "disease" in the sense in which tuberculosis or leprosy are diseases, but it is a condition to which a number of totally different diseases may lead; some of them clearly mental disorders from the outset, mental defects, or poorly balanced mental habits miscarried to a point where the individual is no longer able to extricate himself, where he cannot be considered competent to manage his own affairs and to look out for his personal interests, not to speak of the altruistic demands. Some of these other diseases which may lead to insanity are more or less clearly the effect of poisons or of the undermining of the metabolism of the nervous system. Still others are diseases directly affecting the structure of the brain, through tumors, or injuries, or vascular disease or the like.

The nervous system is in one way a very enduring and hardy tissue; it loses least in states of emaciation, but it has little power of reconstruction if once organically damaged. This is the cause of the existence of the irrecoverable wrecks who no doubt form a class, requiring for life special care and protection against themselves and the encroachment by others.

But on the other hand functional disorders of a character most alarming to the uninformed are absolutely curable; the patients pass through periods in which they are not themselves, and then again reach a comparatively normal state in which they can hardly understand the abnormal actions ascribed to them. The fact that 20 to 25 per cent. of those who come to our state hospitals can be discharged recovered, and nearly as many fit for a protected home existence, shows that we are dealing not with a permanent class of individuals but with a group of diseases apt to present a common feature of more or less deep and more or less permanent disorder of conduct and behavior. The number of those who pass merely as nervous, but who have really the same disorders with less marked affection of conduct, is difficult to guess. From a medical point of view it is well to remember that the common saying that neurasthenics and hysterics and psychasthenics do not become insane, is a comforting tradition, but one not well borne out by experience, when these terms are used in a broad sense.

If we do not deal with a definite unit but with widely differing disorders, what is the common link that makes us speak not of "insanities" as we should, but of "insanity"?

They tend to make it necessary to interfere with the patient's own control and legal responsibility. They affect the patient's ability to regulate his conduct and behavior, and expose him and others to risks, perhaps only through the patient's "self-respect," or through his unwillingness to accept ordinary rules of hygiene and medical direction, refusal to rest, refusal of food, tendency toward self-mutilation or suicide, or aggressiveness and liability to disturbance of the peace, or actual violent assault. Or the patient may betray an unwarranted yielding to impulses, such as unchecked sexual yearnings, from merely platonic pursuit and insistence by letter to startling expressions of affection, proposals and attack, or a mere surrender to the opportunities of immoral houses; or the impulse leads to drink and its dangers; or to a wild and reckless spirit of expenditure, shown, for instance, by buying a dozen pairs of shoes, ordering a champagne bath in the Waldorf-Astoria, or ordering a piano each to a whole string of female friends; or inner emptiness and unrest combine to prompt kleptomania, or incendiarism. Or a husband says that his wife has either become a tantalizing fault-finding devil, making his life miserable by insinuations and scenes and complaints and inconsistent behavior, or she must be sick; it is a question which he cannot settle or put up with any longer; something must be done to control the aberration. Or the wife of a well-known ghost-hunter begins to take the spirit-warnings too seriously, beyond all reason, and creates embarrassing situations; he has to check her even against her remonstrations. Or note the attacks of terror in epilepsy, to the fright or suspicion in alcoholic delirium and states of persecution, and to all the strange and startling outbreaks of the fantastic dementia præcox. These are some of the innumerable difficulties the patients, or their friends, get into and the point is reached at which the former have to be checked. When the danger is acute and great as in a fever delirium, matters are not minced; the patient is unquestioningly left under the direction of the physician, taken to a hospital, kept there and if necessary, held in bed and subjected to the treatment and hospital rules without any discussion about the legal rights of the citizen. The citizen's first duty there is to submit to lawful order and best régime. In many other "insanities" the patients are just as unable to control themselves and to look out for themselves; they also remonstrate and resist; but in such a way as to appeal more connectedly to the fellow-citizen and to demand legal consideration. To take such patients to general hospitals is unsuitable, because they often do not do well there, are disturbing, often do not feel sick, and feel out of place. They need physicians and nurses trained to meet the peculiar demands, and perhaps merely a routine of orderly quiet life with occupation, and sufficient rest and protection against irritating influences. The only available places are the private sanitariums and our state institutions which serve as homes for the incurable and for the acutely disturbed and also for those in the protracted states of mental unbalance. To judge from contact with many trustees and visitors, these institutions are places really little known by the public; little known even by the authorities controlling these hospitals, and by the judges and the average physician and other persons likely to be appealed to for advice when the conduct of a patient becomes difficult to control. Outsiders repeat antiquated tales not much better than the gossip palmed off by the "antivivisectionists." The consequence has been a barbarous inconceivably stupid fence of laws around the institutions which alone are adequately equipped to bring timely or lasting help to the affected patients. The whole conspiracy of facts and imaginations and traditions has created a class of humanity under a special legal ban called forth for the protection of a few cantankerous individuals, where all that is necessary is the application of the quarantine principles, and provisions for legal reinforcement of medical persuasion and advice, or provisions for legal relief from unwarranted interference.

Nobody has a right to go where he pleases with diphtheria or small-pox. Nobody has a right to display himself in the street in a delirium. Nobody has a right to attempt or to commit suicide. The more we look on the matters as issues of health, the more do we accept even the impending danger as reason for action. We do not want to wait until a person exposed to small-pox breaks out all over, because he is a danger to the community before that. Even if a diphtheria-carrier has not diphtheria sores, he must be quarantined if he is the carrier of a virulent strain. In the mental cases much stronger evidence is asked for as a rule by those who do not know the seriousness of the conditions. Danger and threat of suicide can be foreseen by any experienced physician; but a judge may want evidence of unmistakable threats and attempts made. It actually looks more as if the field were ruled by the principles of criminal law with its provisions that nobody can be punished for a thing that has not been done.

We see then even in the case of non-criminals that the term "insane" is a high-water mark justifying the application of *some process of quarantine* or commitment. It applies to a stage or condition of many kinds of disorders which can exist without being destructive of safety or self-control, but are apt to involve the behavior so as to make protective measures necessary. Quarantine principles would be the ideal thing. Since the restriction applies to individuals who often do not submit to persuasion (as do most reasonable subjects of quarantine) but who object and fail to understand the situation, the right of legal appeal must, of course, be freely granted. It is decidedly an anomaly that has made legal decision obligatory for all admissions to a hospital even if there is not the slightest objection on the part of the patient or friends, or on the part of any one except the patient deprived of his own judgment—merely to do justice to the railroading yarns of the dime-novel type or to relieve the superintendent of responsibility.

By another anomaly the committing judge asks the testifying physician whether the patient is insane. To my mind it is the physician's business to state what the patient says and does and shows in the way of disease, and that the disorders thus reported prove him to be incompetent to direct his own case. It is the judge's privilege to declare that the patient's condition is that of insanity, while the physician uses whatever medical terminology he may favor, terms which hold good whether the case has reached the high-water mark of insanity or not, and which do not put a painful stamp on the patient and family.

Whenever we say that a patient is insane, we say no more than that he is sick, and that the disorder is one of the ways of disorder of conduct and behavior demanding certain special precautions of management and especially protection against his or her own warped judgment and impulses. The nature and condition of the disorder which is the physician's chief concern is immaterial to the judge, who cannot know it without study and thus has to keep alive a phantom-unit "insanity" and the notion of an insane class, instead of a roblem of quarantine.

We hear sometimes of a contrast of medical and legal definitions of insanity. This is an absurdity. "Insanity" is a term that I, as a physician, hardly ever use spontaneously. It is a practical designation for a practical situation and through our laws it has become a legally sanctioned term, while in psychopathology it has become a secondary issue. In some text-books there are peculiar strings of words called definitions of insanity. One of the simplest definitions demands that there should be protracted morbid deviation of the condition and conduct of the patient, such as incapacitates him to think, feel and act in relation to his environment in harmony with the standards of his bringing-up, and such as would entail a danger to himself and others.[1]

Law wisely abstains from any attempt at a definition of "insanity."

As a matter of fact it has several widely distinct standards and always according to the specific issue, namely:

1. Commitments.
2. Legal and testamentary competency.
3. Criminal responsibility.

The common link is the question of the existence of a mental disorder. The declaration of the legal status of insanity depends on special conditions for each of the three issues mentioned. The commitment, of course, is the most widely and fortunately most liberally applied category. As such it means nothing but "fit to be taken to a hospital against his consent." For certain contracts and even as a witness such a patient can still be competent, at least as much as a child between twelve and the age of majority, and in many points more. To take away the right of management of the property, requires an additional legal procedure.

With regard to testamentary capacity, the law has definite standards of a peculiarly broad character: the testator may be as insane as can be in any other sense as long as he knows the nature of the bounty and his natural responsibilities to his family, and the property-relations. Any delusions or disorders not involving these do not make the person incompetent.

With regard to crime the matter is not simple.

Many physicians think that a declaration of insanity is equivalent to a declaration of i [illegible] consequence of this assumption is [illegible] and begging the question. If one feels that one should say irresponsible, one says insane; if responsible, not insane. And yet afterward the excuse is urged that the person was irresponsible because of insanity; or the public may demand the execution of a Prendergast or a Guiteau, in the face of undeniable mental abnormality, so that evidently the issue must be different from that of mere mental disorder.

In this matter the written law is somewhat misleading. The pertinent paragraphs of the New York Code read as follows:

> § 20. Irresponsibility, etc., of idiots, lunatics, etc.
>
> An act done by a person who is an idiot, imbecile, lunatic or insane, is not a crime. A person cannot be tried, sentenced to any punishment or punished for a crime when he is in a state of idiocy, imbecility, lunacy or insanity so as to be incapable of understanding the proceeding or making his defense.
>
> § 21. Irresponsibility, etc., of idiots, lunatics, etc.
>
> A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that, at the time of committing the alleged criminal act, he was laboring under such a defect of reason as either
>
> 1. Not to know the nature and quality of the act he was doing; or,
> 2. Not to know that the act was wrong.

A similar see-saw appears in Section 22 in regard to intoxicated persons.

> No act committed by a person while in a state of voluntary intoxication, shall be deemed less criminal by reason of his having been in such condition. But whenever the actual existence of any particular purpose, motive or intent is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive or intent with which he committed the act.

In practice, physicians are inclined to appeal to Section 20 for simplicity's sake. The legal practice calls for the application of Section 21.

Another complication comes through the relation of the corollaries of a state of "insanity" to the punishment. When punishment is measured by responsibility and mental disorders reduce the responsibility, we come to the further inference that the perpetrator of an insane act shall go free. We shall discuss this monstrosity later.

Let us turn first to the criminal acts themselves. Crime is any act that subjects the doer to legal punishment. Without a specific law no act can be called a crime. Which of these acts occur among the insane?

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[1] This is a good formulation for matters of commitment but too lax for those who assume that insanity should spell irresponsibility. The following definition of the issue in criminal cases was offered by Judge Barnes: "If at the time the crime was committed the defendant knew it was wrong to commit such a crime and had the power of mind to choose either to do or not to do the act and of controlling his conduct in accordance with such choice, then he ought to be held responsible, although he was not entirely or perfectly sane." This definition does not use the term insanity, which really becomes an undesirable complication.

In this description of how morbid disorders of conduct and behavior can influence action, I have already pointed out various ways that make the patient liable to misdemeanor. Looking over the mental disorders we see certain types predisposing to special types of crime.

The bulk of morbidly determined crimes is attributable to states of defective or uneven abnormal development, i. e., the various grades of imbecility, probably about 22 per cent. Certain forms of imbecility and defective balance are directly called moral insanity. Here we find thefts, forgery, swindling, sexual assaults and exhibitionism and other perversions, sexual murder, acts of revenge and spite, or mere impulse such as incendiarism. About 12 per cent. of the cases in Köppen's statistics belong to the paranoic group, much more likely to present distinctly aggressive impulses: murder and assault, disturbance of the peace in church or homes, insults, libel, threats and forgery or acts of revenge and sham defense. The simply paranoid forms of the deterioration-processes lumped together as dementia præcox shine with tramp-life, prostitution, exhibitionism, forgery, thefts and occasionally acts of revenge or sham-defense. The paralytic and senile become collectors, thieves, sexually aggressive, perjurers. Their occasional impulsive acts ally them with the epileptics, who present the most dangerous and brutal assaults, murder, rape, theft, and calumny; hysterics follow similar paths, alcoholics perform acts of revenge, and supposed self-defense, and at times epileptoid murders. Depression has led to family murder, a sort of vicarious suicide; or even murder committed for the sake of a passive suicide by execution, and other abnormal ways of breaking through the morbid feeling of tension and restraint. Manic excitements prompt to transgressions and excesses, especially in sexual matters, or vituperation or violence.

The question arises: are there any crimes which are clearly the act of an insane person? Concerning this point I should be cautious. Some of the crimes are so blind and violent that they exclude all cool consideration. But this may hold for any acts of passion. If a murder is well planned and well covered up, or if the delinquent acts normally and with perfect coolness, the act may still be the clear result of an abnormal mental state. It is by far the best rule to claim that no crime or act as such can be estimated properly without a study in the light of other acts and tendencies and the general reaction and complete record of the person.

The practical side of the question of the criminal insane is to determine not so much what crimes occur among the insane as what shall be done about certain crimes in which the issue of insanity is raised, and what the aims are of the criminologist and the judges in their decisions. I assume that the aims are: (1) to ascertain the facts; (2) to determine the guilt; (3) to assign the punishment or judicial remedy; (4) to bring about the effects expected from punishment. As to the determination of guilt, we seem to have a three-cornered interdependence between responsibility, guilt and punishment. The only safe statement is, I suppose, that responsibility is liability to punishment. We might make that mean that every defendant exercised a certain amount of choice to do better or worse. The lesson which the punishment should teach him and others is that he should have chosen the better course and that, not having chosen it, he has made himself liable to that punishment. It is further supposed that it is his duty as a citizen to know that lesson and that he cannot be excused for not knowing it. Irresponsibility through insanity would, I suppose, only apply if on account of mental defect he never could have learned this, or even with this helpful experience or knowledge, he would not have been able not only to choose the better, but really to know his moral lesson. The whole question of guilt is forced to operate with a hypothetical argument because it presumes an answer to the question whether his condition did allow or might have allowed him to know certain things and to make the proper use of what he did not use or choose. It is the theory of the intent that looms up. However that be, it certainly is best to leave out of discussion the question of free will and determinism which divides the camps in Germany. Practical will and practical determinability is all that concerns us. We need not prejudge the universe by a doctrine.

But now how about punishment? It is after all more than retaliation or correction. Our aim is also prevention and protection of society. In this direction jurisprudence cannot remain behind medicine very long. Its rule is, of course, that the individual shall not be punished for acts not committed. We cannot well speak of punishment for mere intentions. Yet we must correct intention. And those intentions which lie as it were in the flesh and blood of a constitution long before they are conscious, call for some measures, if the protection of society demands it. Social quarantine is the only hope for the future. Actual detention of antisocial elements and the prevention of their propagation are as much or much more our duty than is the quarantine of the leper and of Typhoid Mary and the temporary quarantine of the carrier of small-pox. Punishment which does not prevent is insult added to injury. The question thus should arise in every case and it should be addressed to the competent expert or a commission of experts: Should the mental disorder or condition found modify the punishment, or to speak more exactly, the disposal of the case? Is the person fit to undergo the ordinary course of justice? Will he be improved by it? Will he need other measures for prevention than the punishment which law considers a good enough method for the average? On this score I should like to say most emphatically that medical jurisprudence has made egregious blunders. It has been sentimentality-mad or the victim of verbal logic. Infinitely less harm would come from making the sick man take the consequences of his liability to such sickness just as we put a man liable to small-pox under quarantine, instead of letting free a lot of unworthies and raising an appetite for the plea of insanity to a point with exhibits which nauseate every sober-minded citizen. Physicians do not care to be the vaulting pole for escape from natural and proper consequences of a person's nature. It is true we want decent places for the persons detained, chances for a decent and profitable life. Men like Forel have long written and spoken for special colonies for special types of cases. My own feeling is that if we get decent prisons run as they ought to be, many persons now sent to asylums for criminals or let loose had better be sent to prison unless it can be shown that actual harm to their mental health would come from it.

Punishment was and is a means of correction in normal education. This has changed much during the past two generations. There has probably been too much of a reaction from the life of puritan duty. Laws would mean more if we could keep them stern and firm. Among the insane we have abolished the word and thought of punishment. But we have the responsibilities for discipline. We want to make our patients as responsible as possible and it is mainly our task to protect them from spheres in which they would flounder helplessly. If you abhor the conception of relative or partial responsibility, I should stand up for the principle that there is no absolute irresponsibility even among the insane and that it is much better to deal with them from case to case for what there is sane in them, not with the principle of retaliation, but by placing them with a clear understanding just where they belong, according to their make-up and temporary condition. Where mental disorder is demonstrated, none but the principles of equity will wear well. Can they ever be looked forward to here? They would be as little cherished by the real criminal as the indeterminate sentence is liked by the professional; but every fair-minded victim would fare better than with our present way of using legal rules. A common-sense consideration of the facts of conduct and behavior is in order, if possible to avoid that the victim really becomes dangerous and is allowed to perpetuate the poor stock of our race. What a preposterous condition when juries have merely the alternative between the electric chair and acquittal! This is where help is needed and an introduction of equity-principles might justify preventive considerations.

We may be a long way from special colonies. Certain individuals can be employed *near* institutions, if they are too well to be kept there and too dangerous to go wholly free. And others should at least be asexualized—a point on which I hope more of our citizens will in time agree with us when enough evidence is at hand to convince open-minded opponents.

To look back one moment: The law must give us more clearness as to what it wants. It must be ready to deal with disease according to the principles of disease, and therefore realize the necessity of equity principles (rather than the "rules of the game" of evidence in a fight about liberty) and the necessity of consulting the expert not only concerning the indefinable term "responsibility," but also the effect of the special condition on the preventive steps required.

How, now, about the physician in a concrete case? In a genuine and unmistakable case of mental disorder in which an accident otherwise amounting to a crime failed to be prevented, the perpetrator will, according to our present practice, be taken to a jail, but probably be seen by a physician, if not taken immediately to the proper reception hospital, if one exists.

In almost all the *questionable* cases no move was made to get a competent and trained physician until the question of a "plea of insanity" arose. It should always be a suspicious sign if no move is made equivalent to the examination of the patient for a commitment as soon as possible after the act. Where the defense of the criminal is the main thing and insanity the only means of saving him from the consequence of his act, the procedure is usually from the start a perversion of psychiatry. Physicians are called as partisans; examinations must be made under the most unpropitious circumstances. There is no official impartial record kept such as we demand in a well-conducted hospital to-day; there are no trained attendants employed. As soon as the authorities have reason to suspect a mere suspicion of insanity, or of a plea of insanity, the immediate attention of a trained physician should be called; and to be on the safe side every prison physician should have training and experience in psychiatry. He should make a full examination with a satisfactory record and should have the proper type of attendants for the examined prisoner. During the whole stay of the prisoner or suspect the written record of the physician should be kept up, consisting of statements of what the prisoner said, did, and showed on medical examination. Where the condition is doubtful, some states can send the prisoner to a hospital for observation for a maximum period of six weeks. In making an examination for one side or the other the only way to proceed is to come as near as possible to the plan mentioned. Under well-regulated conditions the competent hospital men of the district should do the work for the state as state officials and they should have the right to apply for a period of hospital observation of the patient and always the duty to furnish a written report. The alienists of the defendant would naturally and automatically be guided by the standards of the official physicians.

Now the physician's share in the determination of guilt! The physician's duty above all things is to determine and report the existence of any mental defect or disorder at the time of examination and in the record of the past. This should consist in the simplest possible terms of what the patient did and said and showed medically, rather than a mere learned treatise on the diagnosis and symptoms which should be reserved for the summing up of the written record, if one can be demanded.

If there are no plain facts sufficiently convincing to form a demonstration of an abnormal trend, learned terms will only confuse. The aim should be to show that, in other situations and actions, an abnormality was present, and that it played a definite rôle in the determination of the act under legal consideration. To avoid ambiguity, the term "insane" and "insanity" should be replaced by "mental disorder," specified by its effects in various actions, including or not the act *sub judice*. In this, Mercier insists on a psychologic analysis of the acts. I agree to this only as long as we move on objective ground. The main question is that of intent. Therefore the relation of the existing disorder to the intent must be defined, and here comes the chief point at issue.

Unfortunately the rôle of the physician is at this point involved in an issue which I think should not be looked on as a medical question. If the physician has to say "yes" or "no" to the questions: Do you consider the patient "responsible"? and Do you consider the patient "insane"? he becomes part of the jury or in the absence of a jury expresses himself in a judiciary capacity. Neither responsibility nor insanity are medically useful or even admissible terms. The physician must make it clear that there is a mental disorder and that it had or had not a bearing on the act and, as far as possible, the evidence by which he can prove it. But the rest is a judicial interpretation gratuitously offered by a physician at the risk of being turned down by a jury or a judge who knows more of the law than the doctor, and, at the same time, appears to decide a medical question for him. I do not want to jeopardize the rest of my propositions by insisting too much on this subordinate point, however. I favor it because physicians are too well trained in their business and science to believe themselves able to give always an out-and-out positive or negative reply to a question to which they know science and plain fact can give only a conditional reply. Legal practice opposes the concepts of relative or diminished responsibility and for this the plain man or layman can be had more readily than a man who must aim to keep toward the scientific attitude.

In each case in which a mental disorder is demonstrated, no matter whether it figures as insanity or not, the alternatives of allotment of punishment should be put before the expert for a statement as to the probable effect on the success of the aim of punishment or the effect on the disorder and the needs of protection of society.

Much has been said, and with sad justification, of corrupt medical testimony. It is one of the most disheartening displays of the low standards of our general and business morality. When nobody steps forward to slap the one who can say with impunity: "Every man has his price," we have to hear it until it becomes an accepted standard. And if the professional expert works for his client, what does he do? Ninety times out of a hundred his worst crime is that he assumes what he calls the lawyer's attitude. Where are the legal standards of the great masters? Why do we not ostracize a man who sacrifices the facts and his better knowledge to the undeserved success of his client? This is a matter of public standards of business morality and of morality within the professions. The scandal I am afraid is a symptom of our kind of general ethics. I do not know how the legal profession will check the doings of some of its most successful agents of perversion of fact. We physicians are trying to make some of the men accountable for their statements. But they invariably put the blame on the legal methods, the questions asked and the like.

For this reason I urge a wider use of the *written reports* of the observations and conclusions made by the medical expert which exclude the gambling of the questionaire without in any way excluding the most searching cross-examination. Most cases are simple and cause little trouble. But the cases which give trouble are just the ones in which a man who poses as expert should make a statement for which he makes himself wholly and unmistakably responsible, without any excuse or subterfuge. German expert testimony has its high standards through no other one tangible thing but this accessibility of written and responsible documents.

In trying to prepare this paper I deplored the absence of digests of the practice of our courts. When will the judiciary and legal world introduce research as an obligatory condition of a career of a teacher and put the young elements to work to keep up a system of monographs and digests and to make inquiries into groups of concrete cases and their specific difficulties and demands, rather than dialectic dissertations? The consideration of concrete cases as practical experiments alone will bring order into the bewildering chaos.

My theses are:

1. The solution of the medicolegal problem of mental disorders generally lies in a further development of the quarantine principle, medically and legally.

2. In handling the criminals presenting mental disorder, jurisprudence will have to develop rules of preventive care beside the rules concerning acts already committed.

3. To avoid begging the question, and confusion of definitions, the question of the bearing of mental disorder should not be settled under the heading of guilt only. Insanity and irresponsibility are not coextensive and should not be made so and are not safe terms medically and legally. Therefore, the procedure should cover:

A. The fact of commitment of the act.

B. The existence of mental disorder at the time and its bearing on the act.

C. The bearing of any existing mental disorder or tendency on the legal consequences of the act, the punishment, the prevention of similar acts, etc. In every case with mental disorder it should be obligatory to ask: What is the relation of the mental disorder to the act? and what does the mental disorder demand to make the punishment and correction and further prevention efficient?

4. In order to meet the problem of partial responsibility and crimes of passion, the law should create better alternatives than the unwritten law, and in cases of mental disorder, the equity procedure should be substituted for an unconditional declaration of not guilty.

5. I strongly suggest the requirement of written statements of facts and opinions by the experts employed as the only means of establishing standards.

35 Mount Morris Park, West.

THE PHARMACOLOGY OF IODIN AND THE IODIDS*

J. H. SALISBURY, M.D.
CHICAGO

A satisfactory explanation for the action of medicines can be found only in a consideration of their chemical relations since drugs can act only by producing chemical changes. In the case of iodin the interrelation between its chemical properties and its physiologic action ought to be found quite readily, since it is an element and its chemical characteristics are well understood. A difficulty arises, however, in discussing the relations of any drug, from the fact that the animal system on which it acts exhibits such a complexity of chemical changes that we cannot adequately explain the effects of even the simplest element on it. Nevertheless it will be worth while to review briefly the more marked chemical properties of iodin to see how far we can go on the road to a rational explanation of its pharmacologic and therapeutic action. This element is remarkable, in the haloid group, for the comparative weakness of its chemical affinities and the ease with which it is freed from its compounds. In consequence of this property it is easily displaced from its combinations by oxygen, chlorin, and bromin. Hydrogen iodid or hydriodic acid is especially unstable. Iodin shows a tendency to form peculiar double salts, such as the combination with potassium iodid, giving the hypothetical compound, KI_3, and the double salts with mercury, such as potassium mercuric iodid, $2KI, HgI_2$, or K_2HgI_4. The readiness with which it becomes free is shown in the well-known incompatibility between potassium iodid and ferric chlorid, in which case ferrous iodid is formed instead of ferric and a portion of the iodin assumes the free state. This reaction is largely due to the fact that ferric salts are capable of reverting to the ferrous condition and *vice versa*, but it must be remembered that quite similar changes are constantly occurring in the animal organism. Another property of iodin which must be of physiologic importance is its tendency to combine with fats and fatty acids. Similar reactions occur with alkaloids, with which it forms insoluble compounds, and with proteins, into the composition of which it enters to form new compounds and in many cases to displace the corresponding chlorin ion. The iodo-organic compounds are comparatively stable and inactive and it is chiefly as the result of oxidation that the iodin again becomes liberated. One of the most important organic compounds of iodin is the globulin found in the thyroid gland, which undoubtedly plays an important rôle in the metabolic processes of the normal body. This substance has its analogues in other parts of the organism and it is believed that no living cell is entirely devoid of its organic iodin compound.

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* Read at a meeting of the Evanston and North Shore Pharmacologic Society, at Evanston, Ill., April 14, 1910.

When we consider the unstable nature of its compounds and its readiness to enter into all sorts of compounds it is easy to see what a disturbing element free iodin must be in the animal economy. It may readily be compared to fire, which, useful, when under control; for the warmth which it affords, is to be dreaded when it is allowed to exert its destructive action unrestrained. That the system is able to use this agent in ordinary metabolism is undoubtedly due to the fact that the protein combination in which it is deposited in the thyroid is so slowly decomposed that its destructive action is just enough to secure the physiologic changes necessary for the removal of waste and for the control of nutrition. When for any reason this control is lost we see in the phenomena of hyperthyroidism the manifestation of a mild form of iodin poisoning.

From its chemical nature iodin can exist only for a short time in the animal system in a free state and when absorbed iodin is changed to an iodid or to a protein compound so that the internal actions of iodin are practically identical with those of the iodids and are to be considered with them. It is, not to be forgotten, however, that the iodids are readily decomposable with the liberation of iodin so that it is probable that the action of iodids on the cells and fluids of the body includes the temporary action of free iodin to a limited extent in their ordinary activity and to a much greater extent in circumstances in which this action amounts to that of a toxic agent.

The iodids are mainly very soluble, easily dialyzable, easily ionizable salts. These properties are responsible for much of their pharmacologic and therapeutic action. The easy solubility makes it possible for the organism to dispose of such amounts as are not easily combined with protein by elimination through the various emunctories. Thus, according to H. C. Wood,[1] John Marshall recovered 265 grains daily from the urine, in a patient under his care who was receiving 360 grains of potassium iodid daily. The dialyzable character of these salts enables them to enter cells readily but when within the cell they have combined with protein molecules they become colloids that will not dialyze out again until they have been changed to the crystalloid condition. Their ionizable character makes them ready to enter into double decompositions that disturb the chemical relations of the other conditions of the cell and alter the character of the cell plasma. Particularly the iodid ion tends to displace the chlorid ion and to cause its extrusion from the cell probably in combination with the potassium ion which is usually the metal introduced in combination with iodin.

With this brief discussion of the chemical relations of iodin we are prepared to enter on a consideration of the pharmacology of this element and its salts. We shall consider first the local action of iodin and second the action of iodids and the constitutional action of iodin.

LOCAL ACTION OF IODIN

Iodin is essentially an irritant which destroys the cell, combining with its protein constituents and provoking a reactive inflammation on the part of tissues less violently affected. The affinity of iodin for the protoplasm of the cell is seen when vegetable cells are stained with Lugol's solution. The protoplasm receives a marked yellow stain indicating that the iodin has penetrated the cell and entered into combination with its protein constituents. The experiments of Lillie[2] on unfertilized *Arbacia* eggs indicate that, next to cyanids, the iodids of potassium and sodium have the greatest power of increasing the permeability of the plasma membrane and that they thus make possible the loss of the cell constitutents, instituting a series of changes which eventuate in the death of the cell. The destructive action of the element on the lower forms of life constitutes it a good disinfectant. Its value in the treatment of many skin diseases is largely owing to its disinfecting action. Iodin appears to be somewhat astringent, drying and puckering the tissues to which it is applied. The irritation of the deeper tissues develops, somewhat slowly, inflammatory changes which result in throwing off cells destroyed by the iodin and replacing them by new formed tissue. Iodin applied to wounded surfaces and to ulcers acts as an efficient disinfectant and promotes the subsequent healing of the underlying surface. Goebel[3] found a diluted Lugol's solution (iodin, 5 parts, potassium iodid, 10 parts, distilled water, 250 parts) an efficient disinfecting fluid for surgical use. The value of iodin in surgery has been the subject of several recent communications showing a renewed appreciation of an old and well-known remedy.

On mucous membranes the action of iodin is quite superficial, and especially when applied to the gums its destructive action is so limited that it forms one of the best applications for gingivitis. Especially in the treatment of interstitial gingivitis, the so-called pyorrhea alveolaris, it has proved to be one of the best of remedies. Its action on other mucous membranes is similar and the good results obtained from its use are easily explained by its disinfectant action, its destruction of tissue, particularly that of low vitality, and the stimulation of healthy tissue to regenerative action. The hyperemia induced by such stimulation plays a very similar part to the hyperemia induced by the method of Bier in the treatment of inflammation and infection.

INTERNAL ACTION OF IODIN

When absorbed into the blood iodin necessarily enters into combination so as to form iodids or possibly combinations with protein material. Its solution in the akaline media of the blood and lymph can be effected only with the formation of some oxidized form of iodin, such as iodates or perhaps a transient occurrence of the lower acids, which we know are very unstable. The action of iodin in its free state cannot, therefore, be quite equivalent to the action of the iodids since it involves the action of these unstable compounds which must have a destructive action corresponding to their instability. Iodin is not absorbed to a perceptible extent from the sound skin but from raw surfaces, wounds, and mucous membranes it may be readily taken up so that it may be demonstrated in the urine and may even produce symptoms of poisoning. In some forms absorption may take place through the skin. Thus Kellermann[4] by inunction with iothion found that from 8 to 18 per cent. of the iodin was absorbed by the skin and excreted in the urine. Himmelsheber[5] attributes the occurrence of acute hyperthyroidism following operation for prolapsus uteri to the absorption of iodin from iodized catgut sutures.

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[1] Wood, H. C.: Principles of Therapeutics, Ed. 14, p. 375.

[2] Lillie: Am. Jour. Physiol., xxvi, No. 1.

[3] Goebel: Centralbl. f. Bakteriol., 1906, xliii, 86.

The symptoms of iodin poisoning are throughout characterized by their irritant character. According as the irritation is produced on the mucous membrane of the gastro-intestinal tract, the internal organs, the respiratory mucous membrane, or the skin, various types of reaction are produced and these types are worthy of special study as they may point the way to therapeutic applications.

Large doses of iodin are irritating to the stomach and may produce gastritis. Suppurative gastritis has been attributed to the action of iodin, it being supposed that iodin produced a pustular eruption in the stomach similar to that sometimes occurring on the skin under its influence. From experiments on dogs with Pawlow's miniature stomach, A. Bickel[6] found that iodin and potassium iodid increased the amount of gastric juice, thus tending to produce hyperacidity. This was followed by an increased secretion of mucus, so that these agents, like alcohol and other irritants, are capable of producing a gastritis having the characters of acid gastritis. A similar action was produced by an albuminous compound containing iodin. Bickel proposes to use this experimental production of gastritis as a test to determine whether a preparation contains iodin in a therapeutically active form. If such a compound increases the acid and mucus of the stomach experimentally it may be assumed that it will exhibit the therapeutic properties of iodids in the organism.

Colic and diarrhea are frequent symptoms of acute iodin poisoning. Vomiting may occur. The inflammation of the gastro-intestinal tract is seldom severe, and if it is not, large doses do slight harm. In spite of the active symptoms produced, iodin poisoning is seldom fatal. This result is averted by the conversion of the element into compounds which are non-irritating and readily eliminated. In cases in which absorption has already taken place the gastric and intestinal symptoms of iodism are usually lacking or very slight. In small doses suitably diluted the gastro-intestinal irritation is not noticeable, and the remedy is often used for symptoms of irritation of the stomach, such as vomiting, gastralgia, etc. It has been prescribed along with phenol for the treatment of typhoid fever, probably on the supposition that it would exert an antiseptic action, but such an action in the alkaline contents of the intestine is very unlikely, if not impossible.

The action of iodin on the internal organs is also that of an irritant and when marked is shown by rapid pulse, flushing of the surface, increase of temperature, tremor, dizziness, and general weakness. Iodin introduced into the circulation takes the form of an iodid or of an organic iodin compound. It is removed from the circulation by the cells in general and especially by the cells of the thyroid gland. The varying capacity of the cells to take up iodin leads to a varying distribution of the element in the various tissues. The amount deposited depends not only on the character of the tissue, but also on the nature of the compound in which the iodin is introduced.

Labbé, Lortat-Jacob, and Boulaire[7] conclude, from experiments to determine the coefficient of accumulation of iodin in the various organs, that the element has a great affinity for lymphoid tissue. It was deposited most abundantly in the spleen and lymph glands and next in the liver, which contains lymphoid tissue. Iodin, iodids and iothion cause the greatest accumulation in the lymphoid tissue while the fatty compounds leave very little. Loeb found the brain, spinal cord, bones, and fat free from iodin after the administration of potassium iodid, but found in the blood and liver, after removal of soluble iodin, a small quantity which was probably in the form of an organic compound. When iodoform, iodanilin, and ethyl iodid were administered, a considerable amount of iodin was found in the fatty tissue. It would seem that the presence of the iodin in an organic combination makes it possible for certain tissues to absorb it that cannot take it from the inorganic forms.

In the thyroid iodin is stored in the form of a colloid, not in the cell, but in the intercellular spaces. That the amount of iodin which can be stored in the thyroid is greater than that which is taken up by other organs is well demonstrated. This is not accounted for by the colloid character of the thyroid secretion, for other colloids, like that of the hypophysis or pituitary gland, do not contain an especial amount of iodin. The thyroid appears to act as a detoxicating organ to remove irritating poisons from the blood and to store them in its tissues. That the substance removed is not always iodin appears from the fact the colloid is frequently secreted by the thyroid cells without containing any iodin. In these cases it may be that the gland has removed other irritating substances by combining them with the colloid and storing them in the intercellular spaces. However, this may be, the removal of iodin from the circulation by this means is a most interesting phenomenon. If we look on this production of iodin-containing colloid by the thyroid as a detoxicating process, it will be readily understood that marked effects from the ingestion of iodin occur only when the iodin is present in the blood in such quantity that the thyroid cannot remove it fast enough to prevent toxic effects or when the thyroid has already exhausted itself in the production of colloid and small quantities of iodid pass constantly into the blood either from the colloid secretion stored up in the thyroid or from other sources. The colloid, once deposited, appears to remain until it is taken up by the same cells which produced it and returned to the blood. Experiments by Carlson[8] show that the colloid is not taken up by the lymph which contains no iodin. When this introduction of iodin from the colloid into the blood takes place in normal amounts it may perform a useful function in metabolism; if the amount thus set free is excessive, symptoms of iodism appear which seem to be identical with hyperthyroidism. Whether the iodin produces these effects as an organic compound with protein or whether a decomposition of the protein must first take place so that the iodin becomes free or, at least ionic, is not determined.

That iodin released from the thyroid proteid may act as an immunizer against other poisons is shown by the experiments of Reid Hunt[9] with acetonitrile. This observer found that mice treated with thyroid extract containing iodin would survive a dose of aceto-nitrile from one-half to twice larger than that which was fatal to control mice. The protective power was shown to be nearly proportional to the iodin content of the thyroid extract. Hunt also found that iodids and other compounds of iodin afforded a similar protection, although not to the same degree. It is probable, therefore, that iodin plays an important rôle in the control of nutrition and metabolism by the thyroid gland and that the gland may act both as a moderator and as a stimulant of metabolic activities, according as it removes iodin or other irritants from the blood and stores them in its tissues, or returns them to the blood when needed. Iodin is eliminated by various emunctories, among which the kidneys are of prime importance. The elimination through the kidneys may lead to such irritation of these organs that a nephritis may be set up, which contributes in no small measure to the injurious effects and rare fatal issue of iodin poisoning.

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[4] Kellermann: Ztschr. f. exper. Path. u. Therap., 1905, ii, 416.

[5] Himmelsheber: Centralbl. f. Gynäk., Aug. 28, 1909.

[6] Bickel, A.: Klin.-therap. Wchnschr., 1907, xiv, 1255.

[7] Boulaire: Compt. rend Soc. de biol., Paris, 1906, lxi, 306.

[8] Carlson: Am. Jour. Physiol., xxvi, No. 1.

[9] Hunt, Reid: The Probable Demonstration of Thyroid Secretion in the Blood in Exophthalmic Goiter, THE JOURNAL A. M. A., July 20, 1907, p. 240; The Relation of Iodin to the Thyroid Gland. Ibid., Oct. 12. 1907, p. 1323.

Elimination by the respiratory tract gives rise to some of the most characteristic symptoms of iodism. Salivation is a common symptom. Coryza and more serious inflammation of the nasal mucous membrane may ensue. The irritation of the bronchial mucosa may lead to hoarseness, cough, asthmatic symptoms, etc. These forms of respiratory irritation are easily elicited by the iodids when they produce no especial general or gastro-intestinal symptoms, because on the surface of the respiratory mucosa decomposition with liberation of free iodin most readily occurs. The increase of secretion in the bronchi under the influence of iodids has been made use of as a diagnostic measure to secure the presence of tubercle bacilli in the sputum or by causing the production of râles in the neighborhood of tuberculous foci to facilitate their recognition by auscultation.

Irritation of the skin results in the production of various eruptions such as erythema, acne, bullæ, which may suppurate, and ulcerations. The acne of iodism is likely to result in pustules which may be quite troublesome. The acne has been attributed to a derangement of the circulation in the superficial areas of the skin. F. Schidachi[10] reports 5 cases of erythema nodosum from the use of iodids and discusses some interesting questions in this connection. The suggestion that such eruptions are connected with kidney lesions received no confirmation from these cases, as albuminuria occurred in only one case. The theory that the eruption was due to imperfect elimination of the iodid could not be maintained as quantitative determinations of the iodin excreted showed that the intensity of the eruption did not in any way correspond to a lessened elimination by the kidneys. The lesion seemed to be due to a disturbance of the circulation similar to that supposed to cause acne, but affecting the deep instead of the superficial blood-vessels. Why there should be a difference in the vessels affected in various cases is not explained.

PHYSIOLOGIC ACTION OF THE IODIDS

The iodids are, as has been said, mostly soluble, dialyzable, and easily ionizable salts which are eminently fitted to produce a slow but profound effect on the changes going on in the cells. Under their influence cells waste and the more lowly organized the tissue, the more readily is it affected, so that fibrous tissue is especially likely to be softened and removed during the action of the iodids. In their internal activity the iodids repeat the actions of free iodin, causing the symptoms of iodism when they are administered in large doses. Their rapid elimination and the probable transformation into a colloid form prevent a marked development of this action so that the acute manifestations of iodism are seldom noticed in the administration of the iodids and then usually only for a short time. Iodids give important assistance in the elimination of metallic poisons, particularly lead, mercury, and arsenic. The explanation of this action is not positively known. It is believed that the iodid acts by producing a soluble salt of the metal, but it seems quite as likely that the iodid may release the metals by breaking up proteid compounds which they may have formed. A similar action may explain the increase of elimination of toxins under their influence.

The action of iodids on the circulation has been much studied but it is not certain whether they possess any marked action on the arterioles or not. It has been claimed that they lower blood-pressure, but some of the experiments seem to indicate that the first effect is that of an irritant to the vessel walls, causing contraction of the arterioles and a consequent temporary rise of blood-pressure, and that they develop their influence in lowering blood-pressure only by their action on the fibrous tissue of the blood-vessels, by which they diminish arteriosclerosis and eventually lessen arterial tension. However a lowered arterial tension is a prominent feature of hyperthyroidism and would seem to indicate a similar action on the part of the iodids.

Loeb[11] found that the use of iodin preparations by injection did not hinder the degeneration of the aorta produced in rabbits by injections of adrenalin, but very large doses increased the extent of the lesion. On the other hand, Martinet[12] attributes the good effect of iodids on arteriosclerosis to three factors: 1. They lessen arterial tension to a certain extent and relieve the heart. 2. They act as lymphagogues; they lessen edema although at first they increase it. 3. They are useful by their action on nutrition.

Iodids are useful in asthma, but the mechanism of this action is unknown. They are good expectorants because being excreted by the bronchial mucous membrane, they tend to liquefy secretions and to promote the expulsion of the sputum. A similar explanation will suffice for their favorable action in coryza and nasal catarrh.

IODISM

The occurrence of iodism during the administration of iodids suggests the following important questions: 1. To what is iodism due? 2. What circumstances favor its onset? 3. Is iodism necessary to the therapeutic action of iodids?

According to A. Djelogolowy[13] iodism is an iodin intoxication which may have more than one cause and is to be attributed to the setting free of nascent iodin by the action of some oxidizing agent on the iodids. This oxidation may take place in the stomach or after absorption into the blood or after the iodid is eliminated on a surface exposed to the air like the respiratory mucous membrane. Djelogolowy concludes that in certain individuals the conditions in the stomach are especially favorable to the spitting off of free iodin and the production of an iodin intoxication. In these individuals the acidity of the gastric juice is high and the stomach contents contain nitrous acid produced from nitrites derived from the saliva or from the food. The nitrous acid sets free iodin from iodids when given as medicine. This theory affords a useful hint as to the giving of iodids, viz., to give with them something to neutralize the excess of acid in the stomach. The ordinary precaution to administer them in milk is seen, therefore, to be based on sound principles. The protein of the milk tends to neutralize the excess of acid in the stomach and thus to prevent the action of nitrites on the iodid. Probably the administration of alkalies would afford a like security. Djelogolowy finds that the amount of nitrites in the stomach contents varies with the abnormal secretion relations. On the amount of nitrites depends the amount of iodin split off and to a corresponding extent the sensitiveness of the patient to iodin preparations. The setting free of iodin and the presence of nitrites are constant symptoms presented by the patient in whom they are found, for they are always found on repeated examinations with unimportant variations.

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[10] Schidachi, F.: Med. Klinik, 1907, iii, 169.

[11] Loeb: Deutsch. med. Wchnschr., 1907, xxxiii, 382.

[12] Martinet: Presse méd., Paris, 1906, xiv, 351.

[13] Djelogolowy, A.: Arch. f. Verdauungskr., x, No. 3.

Not less important in this connection are the views promulgated by Erlenmeyer and Stern,[14] who, in discussing the use of iodin in arteriosclerosis, conclude that iodism is a necessary accompaniment of the therapeutic action of the iodids. They regard the action of iodin as essentially the action of the iodid ion, and hence think that it cannot be exhibited unless the iodin is in the ionic form. It can be obtained only from such preparations of iodin as dissociate in the system. Of these the iodids of the alkali metals are the most powerful. Iodism is an unavoidable side-action of the activity of the iodid ion. Its intensity is to be moderated, but the occurrence of iodism is neither to be dreaded nor to be entirely suppressed by antagonistic agents. If the views of these authors are correct, the administration of iodids should be conducted with the definite aim of developing a mild form of iodism with as small doses as possible. In the opinion of Erlenmeyer and Stern organic compounds of iodin are therapeutically efficient only on condition of their splitting off iodin in the body so that such compounds can be only somewhat uncertain substitutes for potassium or sodium iodid. If we can guard the stomach from the injurious action of iodin it would seem that potassium iodid is still the best salt to develop the therapeutic activities of iodin.

While we must leave a number of theoretical questions unsolved the preceding discussion suggests the following practical problems worthy the attention of clinicians and pharmacists. Since the liberation of iodin appears to be the cause of the untoward effects of iodin and the iodids what means can be taken to avoid this occurrence or to restrain it within moderate limits? This is a problem to the solution of which the knowledge of the pharmacist may bring valuable aid.

Again what is the proper treatment of this condition when once produced? In answering this question pharmacy and toxicology should come to the aid of practical medicine.

Lastly, if this condition in a mild degree is the indispensable condition of therapeutic efficacy from the iodids, pharmacologists ought to find some way to evoke it in the system without allowing it to go too far and should teach us how to avoid the injurious action of the remedy on the gastro-intestinal tract and the excretory organs.

I shall not attempt to discuss these questions, but will leave them to the reader in the hope that some substantial contribution to their solution may be presented.

2425 West Adams Street.

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[14] Erlenmeyer and Stern: Klin.-Therap. Monatsh., March, 1909.

THE EXPERIMENTAL PRODUCTION OF SECONDARY UNION BETWEEN NORMAL AND CARCINOMATOUS EPITHELIUM—PSEUDO-METAPLASIA*

PEYTON ROUS, M.D.
NEW YORK

In the never-ceasing discussion on the origin of cancer, much attention has always been given to that continuity between normal and carcinomatous epithelium which is so frequently observed at the edges of tumors. Many pathologists hold that the transition here noted is evidence at once of the primary seat of the growth and of its manner of origin. Certainly this evidence would seem strong, and those who do not accept it are few. Ribbert has long held that a secondary union really explains such pictures, and Borrman,[1] his pupil, has collected many specimens which histologically further this view. Experimental evidence for it, however, has been lacking.

In the course of a comparison of the conditions regulating the growth of transplanted tumor and a transplanted normal tissue[2] I have examined many grafts in which mixed tumor and embryonic tissue have grown intimately together in the new host. A few of these have shown microscopically an undoubted union between the carcinomatous and the embryonic epithelium, especially that of the skin (which, on its growth in the new host, tends to assume the mature form). Mouse tumor, adenomatous or alveolar in character, and hashed mouse embryos, 1.0 to 1.6 cm. in length, have been used. The tumor is easily recognizable in such a mixed graft. The union of it with the normal epithelium is seen most often where tongues of the two, growing in opposite directions along a rift in the injected mass, have met. In some cases a real fusion does not take place, and where the tissues have come in contact they remain sharply distinguishable, although no fribril or free space separates them. In other instances there occurs such an intermingling of cells at the meeting-point that with the microscope it is impossible to determine exactly where normal epithelium ceases and carcinomatous begins. Indeed, on histologic evidence alone, it would be said that here was a metaplasia. The possibility that in these instances one may be dealing, not with tumor tissue at all, but with a junction between skin and skin appendages, can be excluded.

The fact thus experimentally brought out that normal and carcinomatous epithelium may secondarily unite probably explains only a part of the recorded cases in which a continuity between the two has been observed. It does not prove that such a continuity may not often be primary. But it should lead to more caution in the acceptance of pictures at the edge of a growth as evidence for the growth's point of origin, or for its having arisen by a metaplasia. At the edge of an ulcerating epithelioma, for example, where the skin epithelium is making attempt at repair, and the tumor tissue is extending toward it, there must occur many opportunities for a secondary fusion of the two, such as has been here reported.

309 West Seventy-fourth Street.

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* From the Laboratories of the Rockefeller Institute for Medical Research.

[1] Borrman, R.: Ztschr. f. Krebsforsch., 1904, ii, 1.
[2] Rous, Peyton: Jour. Exper. Med., 1910, xii, 344.

THE EXCRETION OF HEXAMETHYLENAMIN IN THE SALIVA*

PAUL J. HANZLIK
CLEVELAND, OHIO

The excretion of hexamethylenamin in the urine was reported by Nicolaier[1] in 1899. The favorable results obtained from its use as a urinary antiseptic created an interest in its mode of excretion by other channels. Crowe[2] has reported its excretion in the bile, pancreatic juice, cerebrospinal fluid, synovial fluid, and in the saliva and milk of dogs, and has used the drug as a prophylactic and therapeutic agent in meningitis, but particularly in gall-bladder disease due to gall-stones complicated with *Bacillus typhosus*. The excretion of hexamethylenamin in human milk has also been observed.[3]

Recently W. M. Barton[4] and E. J. Brown[5] have reported the use of hexamethylenamin in the treatment of otitis media and suppuration of the right antrum. The possibilities of treatment of meningitis complicated with otitis media and infections of the sinuses were suggested in Crowe's work. In Barton's case the excretion of the hexamethylenamin by the mucous membrane was shown by the chemical test. In Brown's cases no attempt was made to detect the appearance of the drug in the secretions.

The mode of excretion of hexamethylenamin as such or as formaldehyd plays an important part in the estimation of its value as an antiseptic. In the urine it has been observed that at least a part of it appears as formaldehyd if the urine is not voided too frequently. Sollmann[6] has shown that a considerable part (if not all) of hexamethylenamin is excreted unchanged in the urine, but when the urine was retained in the bladder for one and a half hours, it showed a slight trace of free formaldehyd. Imitations, outside the body, of the conditions of the urine in the bladder gave practically the same effect as to the rate of decomposition of hexamethylenamin. These results show, therefore, that the conditions of the body and urine favor the decomposition of hexamethylenamin into formaldehyd when taken internally, although the process goes on very slowly. As to the excretion of free formaldehyd in the bile, pancreatic juice, milk, blood, and cerebrospinal fluid after the internal administration of hexamethylenamin no data are as yet available. The tests which were applied for the detection of the drug in these fluids apply to free formaldehyd or formaldehyd liberated by the catalytic action of sulphuric acid on hexamethylenamin.

About a year ago Professor Sollmann suggested that I investigate whether hexamethylenamin is excreted by the human saliva, either free or as formaldehyd. So far only two experiments have been made, but since these gave identical results, a preliminary communication may now be in place. A normal subject took by mouth in gelatin capsules, respectively, 0.6 and 0.3 gm., hexamethylenamin, and the saliva was collected and the following tests applied every fifteen minutes for at least one hour:

For hexamethylenamin direct, the bromin test was used, the saliva being previously boiled with a few drops of dilute acetic acid to remove the troublesome mucin and then filtered. The phloroglucin test was applied for the detection of free formaldehyd; the phenol and salicylic acid tests were also used. Checks, with the same test, were made on the same saliva before the drug was taken.

Experiment 1.—One-half hour before the drug was taken, the saliva was negative to all tests; on the addition to it of hexamethylenamin it gave positive results with all tests, while the formaldehyd test was negative. At 9 o'clock 0.3 gm. hexamethylenamin was taken. Samples tested with bromin water gave results as follows: Fifteen minutes later, cloudiness; thirty minutes later, a precipitate; forty-five minutes later, a small precipitate; sixty minutes later, a faint cloudiness. The salicylic acid and phenol tests gave corresponding results but in sixty minutes the phenol test was entirely negative. No free formaldehyd was found at any time.

Experiment 2.—One-half hour before taking the drug, saliva was negative to all tests; on adding to it hexamethylenamin it gave positive results with all tests, but the formaldehyd test was negative. At 8:50, 0.6 gm. hexamethylenamin was taken. Samples tested with bromin water fifteen minutes later gave a cloudiness; thirty minutes later, a precipitate; forty-five minutes later, a small precipitate; sixty minutes later, very cloudy; seventy-five minutes later, faintly cloudy. The salicylic and phenol tests gave corresponding results. No free formaldehyd was found at any time.

SUMMARY

The above experiments indicate that hexamethylenamin is excreted unchanged in the saliva. The greatest amount of the drug seemed to be excreted during the first thirty minutes after its administration. This is indicated by the character of our precipitates with bromin water and the color reactions obtained with the other tests. It is also in accordance with Crowe's observation on its rate of excretion in the cerebrospinal fluid, bile and pancreatic juice, and in the urine as noted by Sollmann.

I have not yet investigated whether the excretion of hexamethylenamin in the saliva has any antiseptic value. The absence of free formaldehyd makes this rather improbable. It must be remembered that the conditions in the saliva are quite different from those in the urine, bile, or cerebrospinal fluid. It is known that the liberation of formaldehyd is a very slow process. The stagnation of these fluids in the body would probably give time for this process to occur; but in the case of saliva, there is no stagnation and consequently it is rather improbable that any effective quantity of formaldehyd could ever be liberated.

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* From the Pharmacological Laboratory of Western Reserve University.

[1] Nicolaier: Deutsch. Arch. f. klin. Med., 1899, xxxviii.

[2] Crowe: Bull. Johns Hopkins Hosp., 1908, xix, 109; 1909, xx, 102.

[3] Bucura: Ztschr. exper. Path. u. Therap., 1907, iv, 308.

[4] Barton, W. M.: The Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear, The Journal A. M. A., March 12, 1910, liv, 871.

[5] Brown, E. J.: *Hexamethylenamin in Suppuration of the Middle Ear and the Nasal Sinuses*, The Journal A. M. A., April 16, 1910, liv, 1308.

[6] Sollmann, T.: Formaldehyde Derivatives, The Journal A. M. A., Sept. 5, 1908, li, 818.

LOCAL ANESTHESIA WITH QUININ AND UREA HYDROCHLORID

REPORT OF FOUR CASES*

W. O. GREEN, M.D.
LOUISVILLE, KY.

Through the courtesy of Dr. Bolling, I have had opportunity to use as a local anesthetic quinin and urea hydrochlorid in four selected cases. The preparation was supplied for experimental purposes only in 5 c.c. ampoules of a sterilized 1 per cent. aqueous solution.

Case 1.—A woman, aged 21, presented a fissure with sentinel pile in the right posterior anal quadrant. A 1 per cent. solution (50 minims) was injected and as shown by repeated tests with the needle it was necessary to distend the tissues before complete anesthesia could be obtained. It was also necessary because of a short needle to make several punctures, and it required twenty-three minutes to obtain complete anesthesia. Induration became manifest in about ten minutes and continued until the twelfth day. Some capillary bleeding, though very slight, followed the extirpation of the hemorrhoid and the incision of the fissure, which latter extended about one-half inch up the anal canal and to the depth of about one-fourth inch above and one-half inch below. There were no apparent general symptoms from the anesthetic, though the patient complained much of headache, which grew steadily worse, until the completion of the operation, and which most likely was due to fright. Before applying the dressings examination revealed a zone of hyperesthesia (to touch, not pain) extending about one-half inch from the injected area on all sides. The process of healing was uninterrupted by complications and lasted about two weeks. The anesthesia diminished until the ninth day, and normal sensation was apparently restored on the twelfth day. Throughout the healing process the surface of the wound presented a pale, grayish appearance and bled slightly on manipulation.

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*Read before the Louisville Society of Medicine, May 5, 1910.

Case 2.—A man, married, aged 42, presented a thrombotic pile in the posterior median line about the size of a hazelnut, which was inflamed and had existed a week. The entire mass was extirpated under a 1 per cent. solution of quinin and urea hydrochlorid, 45 minims being required: Distention was necessary and anesthesia was complete in seven minutes. There was slight capillary oozing and two small vessels spurted, one of which was tied. Slight induration was noticeable about one hour after the injection, but apparently disappeared by the fifth day. Much pain was caused by the introduction of the needle and there was no hyperesthesia to touch. No general symptoms were present. Anesthesia continued in a modified degree, until the fourth day, after which there was apparently more than usual pain and tenderness throughout the remaining time of granulation. There was also, during this time, a tendency to capillary bleeding, at the times of dressing and with the movements of the bowel. The granulating area presented a pale grayish appearance.

Case 3.—The patient was a woman aged 40, married; diagnosis, external hypertrophic hemorrhoid, situated in the anterior median line. A 1 per cent. solution of the anesthetic (80 minims). was almost painlessly injected into the tissues, with two introductions of the needle. It was necessary to distend the tissues and anesthesia was complete in ten minutes. There were no general symptoms. The mass was extirpated and two small arteries spurted, and were caught with hemostats, but not tied. There was slight capillary oozing, though sharp bleeding came later from one vessel and continued for about three hours. Twenty minutes after the operation there was smarting pain which lasted four or five hours. After the pain subsided the wounded surfaces seemed incompletely anesthetized for about twenty-four hours. There was apparently no induration and hyperesthesia was not noticeable. During the process of repair the wounded surface was pale, and there was considerable pain with the movement of the bowel on manipulation of the parts, while walking or maintaining the erect posture. There was slight tendency to bleed even with the movement of the bowel. The wound healed in three weeks leaving a slight scar.

Case 4.—Female, aged 20, single. Prolapsing internal hemorrhoid, situated in the right anterior quadrant, about the size of a hazelnut. A 1 per cent. solution of quinin and urea hydrochlorid (55 minims) was injected without pain, the tissues were distended and anesthesia followed in four minutes. Induration appeared in about ten minutes and was apparent for ten days. Hyperesthesia was noticeable for about twelve days, extending over the anal canal and lower rectum. The primary incision at the base of the tumor made preparatory to applying the ligature, was followed by only slight capillary oozing. There were no general symptoms. The ligature came away on the fifth day and the entire granulating area presented a whitish appearance with little tendency to bleed. Anesthesia seemed complete for seven days and normal sensation was restored about the eighth day.

RECAPITULATION

1. Diagnosis: First case, fissure; second case, thrombotic external hemorrhoid; third case, hypertrophic external hemorrhoid; fourth case, internal hemorrhoid.
2. Solution 1 per cent. quinin and urea hydrochlorid.
3. Amount of solution used, 45 to 80 minims.
4. Distention necessary in all cases.
5. Anesthesia more or less complete; it began in a few minutes (varying from four to twenty-three), and lasted from twenty-four hours to nine days.
6. Bleeding: Capillary much reduced, arterial and venous not controlled; possibly reduced.
7. Induration in three cases appeared in ten minutes to one hour; continued from five to twelve days.
8. Normal sensation restored in twenty-four hours to twelve days, apparently.
9. General symptoms absent (in all cases).
10. As indicated the fibrinous exudate seemed absorbed in from five to twelve days.
11. Hyperesthesia for sensation present in two cases. In one hemorrhoidal case it lasted twelve days.

607 Second Street.

PELLAGRA COMPLICATING A LAPAROTOMY

RAYMOND C. TURCK, M.D.
JACKSONVILLE, FLA.

Patient.—A white woman, aged 30, born and raised in South Florida; married, and having one child aged 3. When I first saw her in December, 1908, she had had a menorrhagia for six weeks, the flow being irregularly profuse, but without pain. The patient was badly nourished, almost emaciated. Although very weak she was able to move about the room. She was markedly melancholic, or rather in varying stages of hysteromelancholia, with occasional suicidal tendencies. There was no rise of temperature or pulse and there were no definite points of pain or tenderness. She gave a history of having had dysmenorrhea for years, and of having temporarily lost her mind twice.

Examination.—I found a relaxed vaginal outlet, uterus in extreme retroflexion, marked endometritis, with both ovaries enlarged and tender. At times she talked rationally and gave me a fairly clear history of her troubles. There was no apparent loss of sense perception; the knee-jerk was slightly exaggerated; Babinski was not present; pupils reacted to both light and accommodation. The patient complained of indigestion, apparently both gastric and intestinal, and stated that she was usually constipated, but had an occasional diarrhea. Examination of the urine gave strong reaction for both indican and indol-acetic acid, but no evidence of kidney lesion. Blood examination showed secondary anemia, with many microcytes and megalocytes. The differential leucocyte count gave 66 per cent. polynuclears, 28 per cent. lymphocytes, 2 per cent. eosinophils, and 4 per cent. transitionals. At this time it appeared that the mental and constitutional symptoms were secondary to the pelvic disorders and to an intestinal autotoxemia.

Treatment and Course of Disease.—Intrauterine douches controlled the menorrhagia without difficulty. The patient was put on supportive and nourishing treatment to prepare her for operation. She was treated from Jan. 8 to Jan. 21, 1909, without much improvement, except a rise in hemoglobin to 95 per cent. Operation was performed at DeSoto Sanatorium under ether anesthesia. The uterus was curetted and a median abdominal incision made. I removed one subperitoneal uterine fibroid, did a ventrosuspension, and resected both ovaries, which were fibrous and cystic. The patient recovered nicely from the operation and the wound healed kindly. For the first few days following the operation she seemed in much better spirits and her mind was apparently clear. Following this she gradually became more and more melancholic, and after leaving the hospital lapsed gradually into a state of dementia. At this time the gastrointestinal disturbances became marked; diarrhea was more or less constant. The tongue was swollen and red, in the fifth or sixth week after operation becoming black and completely filling the mouth. During the last week there was a continued flow of offensive saliva from the mouth. When I first saw the patient she had on the backs of the hands and on the extensor surfaces of the forearms small dry scaly patches resembling a mild psoriasis. I gave this no thought at the time.

Within two weeks after operation, however, these patches increased in extent and on parts of the arms, back and chest there was a condition resembling in places a dry eczema, and in others an erythema. The patient gradually lost strength and flesh. Her insanity became violent and she died six weeks after operation in a state of acute mania.

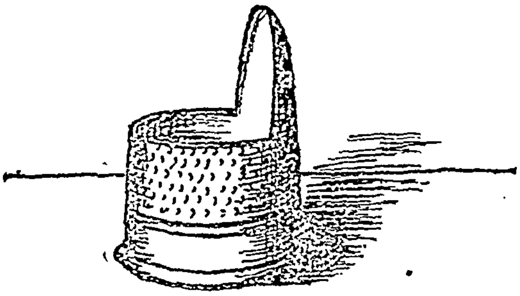
It was not until after the death of the patient and after reading Dr. J. H. Randolph's paper on pellagra[1] that it occurred to me that this case was undoubtedly pellagrous.

The interesting feature of the case, if any, lies in the apparent rapid development of pellagrous symptoms after the anesthetic and operative work.

A SIMPLE TONSILLOTOME

JOHN P. DOUGHERTY, A.M., M.D.
SIOUX CITY, IOWA

This little device may be of interest to those who remove the tonsil by means of the finger-nail, or to those who avoid the finger-nail method, solely from fear of the resultant trauma. It is in principle merely a very strong finger-nail, which can be made as sharp as desired and freely modified as to shape and length. A simple way of making it is to take an ordinary thimble of a size which loosely fits the middle finger, and which is, therefore, very loose for the index-finger on which it is to be used. A hole is filed in the top of the thimble and this enlarged until, with the exception of a lateral projection about the size and shape of a finger-nail, about half the thimble has been cut away. This projection, both at its tip and at its base, should be rather narrower than the finger-nail, and should not include any part of the top of the thimble, as this might interfere with the tactile capacity of the index-finger when thrust into and partly through the instrument. If the instrument be made but slightly sharper than the finger-nail, the tonsil can be removed neatly, quickly and without trauma, and at the same time the danger of cutting adjacent structures is largely obviated. A narrow piece of gauze or tape must be threaded through the instrument to facilitate its recovery in case it slips from the finger.



A simple tonsillotome.

In other than the tonsillar region it may also prove a useful adjuvant to finger-nail dissection, and in some cases may be used in place of a scalpel or scissors.

POPLITEAL ANEURISM SUCCESSFULLY OPERATED ON BY MATAS' METHOD

GEORGE P. HAMNER, M.D.
LYNCHBURG, VA.

Patient.—P. E., negro, male, married, aged 52, gave negative history of syphilis and tuberculosis, though he had a number of suspicious old scars on legs; probably syphilitic. He felt a dull, aching sensation in the left popliteal space a few days after stepping into a post-hole and falling backward with all the weight of his body thrown on the leg behind the knee. Aching and pain continued to grow worse until, two months after the injury, on January 7, I was called in and found the patient suffering considerably and complaining of pain in the left popliteal space, which showed a plainly visible and palpable pulsating tumor about the size of a lemon, making the diagnosis of aneurism unquestionable. The patient was put on potassium iodid grs. x t. i. d. with an increase of one grain daily while the advisability of waiting longer before operation to insure sufficient endothelial lining of the sac was under consideration. On the above treatment the pain soon disappeared and the patient seemed to improve for a time. I saw him at intervals of three or four days, and he remained very comfortable until January 31, when I was called rather hurriedly and found the patient in great pain. The tumor had suddenly increased very much in size, being now about the size of a large orange and hard and tense with pulsation not visible, and only felt slightly on deep pressure, which caused the patient to cry out with pain. The leg below the knee did not look well at all and was beginning to feel much cooler than the other, showing the effects of the pressure on the circulation. Immediate operation was advised.

Operation (February 1).—An Esmarch bandage and tourniquet were applied from the toes to the junction of the lower and middle third of the thigh, and after the tourniquet was made fast the bandage was removed and a free incision made through the skin. The sac was encountered just beneath the skin and was so thin and necrotic in character that portions of the clot protruded. The clot was turned out and the sac washed, the latter being in such a necrotic condition that the greater part of it had to be dissected out. The main trunk of the artery was located just posterior to the sac and after some little search the distal and proximal openings were found about one and one-half inches apart. It was clearly a saccular aneurism, with no collateral openings and occupied the middle third of the popliteal artery. My first intention was, of course, to do a restorative endo-aneurismorrhaphy but the sac was so friable, as to make this unsafe, so I had to resort to obliterative endo-aneurismorrhaphy, closing the openings with several tiers of sutures. I first tried to suture with fine silk but it did not stand tying well and showed a tendency to cut out. The suturing was, however, successfully done with No. 2 iodized catgut, and when the tourniquet was loosened only a small amount of venous ooze took place, which readily yielded to hot compresses. The wound was then closed, muscles, fasciæ and skin, but as the fat, which normally occupies this space, had all disappeared a small dead space was necessarily left.

Post-operative History.—The patient was taken from the table in good condition and the leg bandaged with warm cotton and hot-water bags applied. In about two hours he had reacted and the leg operated on was as warm as the other, a condition which had not existed for some days before the operation. With the exception of a temperature of 100 F. on the second day the patient appeared normal in every way until the seventh day. The dressings were taken off on the fifth day and showed a firm primary union. On the seventh day after the operation the temperature was again 100 F. The wound was again examined and showed a clean dry union. The cause of the temperature was rather puzzling until the ninth day, when pus was discovered oozing from under the edges of the bandages. This time when the dressings were removed pus was flowing freely through two small openings in the skin from deep pockets, one just behind the joint and another higher up the thigh. These pockets resulted from the dead space left when the opening was closed. They were irrigated with a

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[1] Randolph, J. H.: Notes on Pellagra and Pellagrins, Arch. Int. Med., January, 1909, p. 553.

1 to 1,000 bichlorid solution and hydrogen dioxid and packed with iodoform gauze. In twenty-four hours the temperature had returned to normal, and in three or four days the small wounds were covered with healthy granulations. They were kept clean with the antiseptics and packed to the bottom and gave no further trouble. At the end of the third week the patient was taken to his home and in another week, four weeks from the date of the operation, he was able to get about on a crutch. He has been at work for about a week at his usual occupation, that of driving a two-horse dray.

I learned two things from this, my first experience with this operation: First, that it is much better to operate early in such cases, while the tumor is pulsating, than to wait until a clot forms with the resulting damage from pressure, as in this case; and second, that the resulting dead space should never be closed without proper drainage. I think that a small cigarette drain in the wound would have obviated the trouble I had with suppuration in the sac.

1016½ Church Street.

THE AUTOLYSIS OF PNEUMOCOCCI AND THE EFFECT OF THE INJECTION OF AUTOLYZED PNEUMOCOCCI*

E. C. ROSENOW, M.D.
CHICAGO

Pneumococci when suspended in sodium chlorid solution disintegrate and become Gram-negative. The greater the virulence the more rapid the destruction. Non-virulent pneumococci often resist disintegration unless chloroform is added. This process has been proven to be a true autolysis and not due to the action of sodium chlorid in the solution, or to the solubility of the protoplasm of the pneumococcus in water. Several years ago it was shown that the autolytic extract of highly virulent pneumococci in sodium chlorid contained an antiopsonic substance. Similar results have been obtained repeatedly since.

Further studies of the soluble substances and the autolyzed pneumococci are in progress and the following preliminary statements can be made. It seems that by means of autolysis it is possible to separate at least to a large degree the toxic from the non-toxic or antigenic parts of the pneumococcus. The part which goes into solution is the toxic portion. It causes peritonitis and leucocytosis in animals, marked local reaction, leucocytosis, and some fever when injected subcutaneously in man. The opsonic curve shows only a slight rise. It is impossible to immunize animals to any marked degree by repeated injections. Intravenous injections into rabbits may prove fatal.

The injection of the non-toxic and as it appears, the antigenic portion—the autolyzed pneumococci—on the other hand, causes practically no local reaction, only slight increase in the number of leucocytes, but a marked increase in the immunity curve as measured by the specific increase in pneumococco-opsonin.

The usual negative phase is absent. From a number of tests it appears clear that the simultaneous injection of the toxic part interferes to a marked degree with the immunity curve produced by the non-toxic portion.

The injection of autolyzed pneumococci into twenty-five patients with lobar pneumonia seems to show that we have in this material a valuable aid in the treatment of this disease. In two cases of pneumococcus empyemia it seemed to have a marked beneficial effect. Further tests will, of course, be necessary to prove this point. However, it would seem from the evidence at hand that we can by this means stimulate the formation of antibodies at an earlier period than occurs naturally by the infecting pneumococcus.

150 Michigan Avenue.

Therapeutics

ULCERS OF THE LEG

In spite of the advance in methods and technic in most surgical lines, there is as yet no one orthodox method of treating an indolent ulcer of the leg. Physicians and surgeons differ in their methods of treating this condition, and all are more or less successful. The difficulty is to select the particular treatment that is best adapted to the particular kind of ulcer in a leg with a particular condition of the circulation, at a particular age of the patient, with the particular kind of work that he must do. It is self-evident that for the successful treatment of ulcer of the leg all of the above items must be taken into careful consideration before the best treatment for the individual patient can be decided on.

There are certain principles of treatment which must be observed, but which may be carried out in different ways, while there are certain indications, which, in many instances, cannot be carried out. Under these circumstances the obstacles to success are greatly increased, and the good effect of rational therapeutic procedures is greatly impaired, and a considerable prolongation of treatment is thereby rendered necessary.

When the physician undertakes to treat a case of ulcer of the leg, he must consider whether there is a syphilitic element in the case. This is especially likely to be found when the ulcers are multiple and affect both legs somewhat symmetrically. If there is reason to believe that a syphilitic taint is present constitutional treatment, with a mercurial, such as the yellow iodid of mercury (hydrargyrum iodidi flavum), in doses of 0.015 gram (¼ grain), three times a day, after meals, may be desirable. This may be followed after several weeks by the iodid of potassium in 0.30 to 0.60 gram (5 to 10 grain) doses, well diluted with water, half an hour after each meal.

Next, it must be considered what conditions exist remote from the local lesion which tend to perpetuate it. It will at once be found that most of these ulcers are associated with impaired circulation of the limb, which in many cases has resulted in a varicose condition of the superficial veins. This impairment of the circulation may be due to valvular or degenerative muscular disease of the heart, to impairment of the function of the kidneys, to tumors in the abdomen, and, by far the most frequently of all, to pregnancy. Other less frequent causes are an hereditary weakness of the vessels, especially the veins, hard work, especially lifting heavy weights, constriction of the limbs by garters, and sitting with the legs crossed. The defective circulation in the leg often causes edema of the connective or cellular tissue, and congestion of the skin, which may become a dermatitis or an eczema, accompanied by tormenting itching.

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* From the Memorial Institute for Infectious Diseases and the Dane Billings Fellowship in Medicine, Rush Medical College, Chicago.

Obviously the most logical and the easiest way of combating this impaired or deficient circulation in the leg is to keep the patient in bed with the affected limb elevated. But most persons who suffer with ulcer of the leg must work every day, and cannot afford the time to go to bed and wait for the ulcer to heal; hence we must try to have the ulcer heal even under unfavorable conditions.

Other resources must be utilized in order to overcome the deficient circulation. If there is constipation, with edema and congestion of the skin, a saline laxative is likely to prove of advantage by depleting the vessels of the intestines or a vegetable laxative may be of value by stimulating the secretion of the liver and intestinal glands and so promoting elimination of toxic products which impair the circulation.

If there is valvular disease of the heart or weak action of the heart not dependent on advanced muscular degeneration, the tincture of digitalis in doses of 15 or 20 drops, three times a day will prove useful. This drug, however, should not be continued in this dose if the pulsations of the heart are reduced below 60 a minute.

If the peripheral vessels show signs of weakness, and are dilated, the fluidextract of ergot, in doses of 1 to 2 c.c. (15 to 30 minims), should be given, well diluted with water, three times a day, after meals.

If there is thickening of the tissues, of if the vessels show signs of commencing arterial sclerosis, the iodid of potassium or sodium should be given in 0.30 gram (5 grain) doses, well diluted with water, half an hour after meals. After a week one dose of iodid a day is sufficient.

If the urine is scanty, or highly acid, or contains much uric acid, an alkaline diuretic should be prescribed, such as the potassium citrate in 2.0 gram (30 grain) doses, in half a glass of water, after each meal.

If the ulcer is sluggish and heals slowly the solution of potassium arsenite (Fowler's solution) given in 5 drop doses, in water, three times a day, after meals, will sometimes prove beneficial. If anemia is present, iron must be prescribed.

Turning now from the constitutional and general treatment to the local treatment, it will be instructive to read the description given by Dr. Alfred J. Buka, of Pittsburg, Pa. (*Medical Record*, Oct. 9, 1909), of the method of treatment followed in one of the divisions of the Department of Charity and Correction of the City of New York, where during five months he actually handled and treated about 125 patients who had ulcer of the leg. Buka describes this method as follows: The ulcer was first made anesthetic with a 2 per cent. solution of cocain or betaeucain. The floor of the ulcer was then curetted so that all of the granulations were removed. Sometimes where the margins were deep, the floor of the ulcer was scarified, as well as the margin. If the bleeding was free, it was allowed to go on for a few minutes. "If the ulcer bed showed a tendency to tardy or poor granulations it was livened up by painting with iodin or by destruction of the granulations with lunar caustic, 50 per cent. silver nitrate, or pure carbolic acid, to be washed off with alcohol. After the treatment for exuberant or tardy granulations the ulcer area was treated with warm 1-2000 or 1-5000 bichlorid dressings. Sterile gauze pads (about 4-6 inches) were placed in the warm bichlorid solution, and after a free removal of the excess solution, they were placed on the ulcer. Rubber tissue was placed over the gauze and the part was bandaged with 3-inch gauze (not too tight). If the patient remained in the wards rubber tissue was not used and the bandage over the ulcerous area was kept wet with bichlorid solution. All patients were instructed about the importance of rest, elevation, and aeration. After forty-eight or seventy-two hours the patients presented themselves for examination either at the clinics or in the wards. Each patient had the same kind of dressing placed upon the ulcer again and internal medication was instituted. Fluid extract of ergot was administered, 7 to 15 minims, three times a day, and this remedy was to be continued indefinitely."

After two or three dressings of this character, repeated at intervals of forty-eight or seventy-two hours "the ulcer appeared as a bright red, freely bleeding area, and on closer examination small, pinhead granulations could be seen." At this time the character of the applications was changed, as further described by Buka: To stimulate healthy granulations "iodoform (for which there is no excuse in modern esthetic medicine), thymolis iodidum (aristol), or bismuth subgallate" are used. Also frequently combined with these dusting powders were acetanilid or acetphenetidinum (phenacetin). When there is eczema around the ulcer the powder was used freely in combination with salicylic acid. He does not state the strength. A simple, efficient, and antiseptic dusting powder, however, is as follows:

℞.	Gm.	
Acidi salicyli	1	gr. xv
Acidi borici	49	or
Talci purificati	50	āā ℥iss

M. et Sig.: Use externally.

Buka says that wherever it is possible to keep the area moistened with bichlorid 1-5000, it is done. This, of course, would prevent infection, but it would seem that such solutions long continued would tend to inhibit healing rather than promote it, and the continuous application of physiologic saline solution might be better.

If the eczema which was around the sore tended to spread more widely, tincture of iodin was painted about the outer healthy surface, or on the outer zone of eczema. Such applications were repeated occasionally, or until the patient complained no longer of itching at the margins of the ulcer. A salicylic acid powder also tends to prevent the itching. When the applications cause troublesome burning, Buka found that this disappeared after the second or third application, and the patient did not again complain of it. After from three to five dressings he found that healthy granulations would be present and the irritation from eczema would cease; this from the fourth to the sixth week, at which time an "opalescent film" would be found on the ulcer surface. At this stage ointments are used, *i. e.*, after the granulations are covered with a protective layer, the above-mentioned opalescent film. Sometimes the change from irritating powders to ointments was made earlier on account of the patients' complaining of the burning. It seems inadvisable to use an ointment which will promote the growth of bacteria, especially before the granular absorbent tissue has been protected from absorption; hence the object, after the sore is made sterile, of causing granulations to occur and then become protected from absorption by antiseptic powders. This at least is the object of this treatment. A 10 to 20 per cent. ichthyol ointment was used as both stimulating and healing. When ointments are used they should be spread thickly over the ulcer. Ichthyol ointment may be made as follows:

℞.	Gm.		
Ichthyol	10	or	ʒiii
Petrolati ....ad	50		ad ʒii

M. et Sig.: Ichthyol ointment 20 per cent.

From this description certain definite principles of treatment may be deduced. First is the necessity for thoroughly cleansing the affected limb with antiseptic solutions. Those readily available and most generally useful are a hot solution of carbolic acid from 1 to 2½ per cent. (1-100 to 1-40), which is especially useful on account of its anesthetic properties, when there is considerable pain in the ulcer; solution of the corrosive chlorid of mercury, 1-1000 to 1-5000; and solution of dioxid of hydrogen in full strength or diluted with 2 to 4 parts of water. The weaker solutions of carbolic acid and corrosive chlorid of mercury may with advantage be applied continuously for a few days, especially if the patient can be kept in bed, until the congestion and inflammation of the tissues surrounding the ulcer have partially or completely subsided, and the discharge from the ulcer has considerably diminished in amount. When this stage has been reached it is necessary to use remedies which will stimulate the healing of the sore by the growth of granulations. Sometimes the stronger antiseptic solutions, as above stated, seem to inhibit the healing of the ulcer rather than stimulate it. Therefore, many times, and this is especially true when there is a profuse discharge or exudate from the ulcer, either physiologic saline solution, or often better, the official liquor antisepticus perhaps diluted, kept thoroughly applied to the ulcer by repeatedly saturating the gauze in contact with the ulcer, makes the most healing application that can be used. This solution is slightly antiseptic, while the liquor antisepticus alkalinus of the National Formulary is alkaline and not antiseptic. This solution also has healing properties.

When a powder has been applied to the ulcer, it should be covered with a pad of sterile gauze large enough to extend several inches beyond the edges of the sore in every direction. A bandage should then be applied smoothly and moderately firmly from the toes to the knee. This fulfills a third indication by applying gentle, uniform pressure which supports the circulation and tends to prevent swelling and congestion of the leg. The bandage also protects the leg from friction with the garments. and prevents contamination with dirt and infection with microorganisms. This dressing should be repeated every second or third day, according to the amount of the discharge from the ulcer.

With reference to the use of bandages to support and improve circulation, Dr. Edward Adams, of New York, (*New York Med. Jour.*, Sept. 29, 1908) writes:

> The essential feature of ambulatory treatment is a good bandage to prevent congestion, and, to my mind, Unna's bandage is the ideal one. The paste necessary for the bandage is prepared as follows: First dissolve four parts of the best gelatin in ten parts of water by means of a hot-water bath. While the fluid is hot add ten parts of glycerin and four parts of powdered white oxid of zinc; stir energetically until the mixture is cold. Always melt the paste before using by placing the receptacle in a hot-water bath, as it must be applied while hot, it solidifying on cooling and resembling rubber. The limb should be carefully cleansed with soap and water. then with alcohol, and it must be thoroughly dried before the paste can be used. After heating it is brushed on from knee to foot and a gauze bandage is applied, cutting it frequently instead of reversing, in order to prevent wrinkles; then another layer of paste and another layer of bandage, until a support of several thicknesses is obtained. If the ulcer is secreting freely, a window may be provided or the dressing changed. After the last application of the paste some non-absorbent cotton can be applied, giving the bandage a mole skin finish; or some talcum powder can be used, giving the appearance of a plaster-of-Paris dressing. The bandage can be worn anywhere from two to eight weeks.

If during the course of the healing of the ulcer the granulations grow excessively so as to become exuberant, as it was formerly the fashion to say, and project above the level of the surrounding skin, they should be touched with the nitrate of silver stick.

Another therapeutic device formerly much employed, but at present less in vogue, is the application of strips of adhesive plaster. They should be about one inch in width, and long enough to nearly, but not quite, encircle the leg. They should be applied obliquely, alternate strips overlapping each other about one-quarter or one-third of an inch, and the adjacent strips making an obtuse angle with each other. The ulcer should not only be covered, but also a space from one to two inches above and below the ulcer. A dry powder is dusted on the ulcer before the strips of plaster are applied, and the limb is bandaged over the plaster. Strips of plaster applied in this way tend to draw together the edges of the ulcer, to lessen its depth by depressing the edges, to diminish the congestion and swelling of the surrounding tissues, and by securing these results to promote healing of the ulcer.

Where an obstinate ulcer is dependent on large varicose veins, operative treatment of them may be demanded. This subject has been discussed very clearly by Dr. Edward Adams (already quoted) who writes:

> The radical method of treating varicose ulcers after healing, especially when caused by enlarged veins, is by operative interference. The operations chiefly performed are those of Trendelenburg, Schede or Mayo. Trendelenburg's operation is the ligation and extirpation of the internal saphenous vein by a longitudinal or transverse incision at the upper and middle thirds of the thigh, about one and one-half inches in length, along the course of the vein. In suitable cases the relief follows quickly, the wound healing by primary union in about ten days. The operation, however, is not without its dangers, for, in spite of complete asepsis, thrombosis of the proximal stump and embolism have occurred, giving a warning against operating without a strict indication.
>
> Schede's operation consists of a circular incision at the junction of the upper and middle third of the leg, encircling the limb, and removing all the veins to the deep fascia.
>
> Mayo's operation is by the subcutaneous method of dissection. He exposes the vein high up, divides it, and passes over the lower portion an instrument which resembles a dull wire curette. This can be wormed along beneath the skin, dissecting out the vein until it breaks, usually three to four inches from the first exposure. The instrument is reintroduced and the procedure followed as above.
>
> After an operation for varicose veins, the leg should be placed in a Volkmann splint and the patient should remain in bed for three weeks. Massage with active and passive motion should be gradual, and no active work should be attempted until three weeks more have elapsed. A supporting bandage should also be worn for at least six months after an operation of this character.
>
> The chief complication occurring with varicose ulcers is phlebitis. Rest, with elevation of the limb and a wet dressing, must be insisted on; however, if the case is seen early enough, an operation can be performed with excision of the thrombus.

When the ulcer is healed the circulation of the leg should be improved by daily cold bathing and gentle massage, and finally over a thin cotton stocking a well fitted elastic one should be worn.

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[For other information see second page following reading matter]

SATURDAY, JUNE 11, 1910

THE SANITARY SITUATION IN CUBA

That the example of the United States during its occupancy of the Island of Cuba following the Spanish War in the matter of public health and sanitation is being followed out by the present authorities is seen in the official bulletin of the public health department, the January and February numbers of which have just been received.

The fact that Cuba has ceased to be a focus of yellow fever infection at our doors is one for which we in this country have scarcely ceased to feel and to express relief; and Americans have not been reluctant to admit that the reorganized sanitary administration of Cuba deserves credit for carrying on the work inaugurated during the American occupation. As sometimes happens, however, praise from abroad is an embarrassment at home. Local critics of the Cuban government have lately been accusing its Department of Public Health of allowing tuberculosis to increase in Cuba, while using the public funds to eradicate the disease that is most injurious to foreigners, especially Americans. To this accusation Dr. Juan Guiteras, the director of public health, replies[1] with evident feeling in the current number of the official bulletin of his department.

There was a very rapid fall in the death-rate from tuberculosis during the first years of American intervention; but Dr. Guiteras says that this was due to the fact that the enormous mortality of the reconcentration régime had used up the material that furnished the tuberculosis mortality. This decrease was followed by an increase when the children who had survived the miseries of reconcentration arrived at tuberculous age. The influence of the sanitary measures instituted at the time of the intervention and developed and carried out since is shown very clearly in recent years after reestablishment of the natural levels. The Cuban health department has been developing its plans for the last ten years, and the tuberculosis death-rate has fallen from 21.42 per ten thousand in 1900 to 14.9 in 1908. The fall in the mortality from tuberculosis in Cuba, Dr. Guiteras says, has been no slower than in France, Ireland, Norway and portions of Austria-Hungary. The statistics for 1909 are not yet available, but it is believed that the mortality from tuberculosis as well as the general mortality has continued in its descent since the adoption of preventive measures during the first American intervention and since the nationalization of the sanitary service and the creation of a secretary of public health with a place in the cabinet. The director of the health department admits that the immediate results in the campaign against tuberculosis contrast strongly with the results in the campaign against smallpox and yellow fever, but he insists that this is not due to incompetency or neglect. The campaign against yellow fever, he says, is not carried on out of regard for treaties but out of regard for humanity, for the good name of the Cuban people and for the upbuilding of a strong and capable race.

Dr. Guiteras' defense of his department seems a good one; and his resentment at undeserved censure is natural. From this distance, however, we may be permitted to observe that Cuba, having a department of public health to criticize, is to that extent more fortunate than the United States. Moreover, if writers in the Cuban political press, whatever their motives or purposes, find public health measures a good theme on which to harp, this would seem to show that the public mind is either interested in or open to the subjects of hygiene and public well-being—in short, that a healthy public opinion on these subjects is in process of formation. Still more, it is in itself a testimony to the enormous advance which Cuba has made that it is now possible to pick out for criticism a really or supposedly weak spot in the condition of public health in Cuba. Remembering the Havana of old, once called "the filthiest city in the world," if we can suppose that the words "public health" had any other than a sarcastic meaning in the Cuba of Spanish days, can we imagine a Cuban public with any interest to spare for such an abstraction?

"When we contemplate the true sanitary regeneration of the old Spanish colony," says Dr. Guiteras; "when we study the increment in the Cuban population owing both to the increase of natality and the decrease of the mortality; when we can point to the disappearance of smallpox, the reduction of the mortality from malaria to the extent of bringing it down from the first to the eighth place in our records of mortality; when we can place to our credit the eradication of yellow fever with its average yearly record of 600 deaths of Spaniards in the city of Havana alone, the disappearance of the borras fever, so fatal to Cuban children; the gradual decrease of the mortality from infantile tetanus and tuberculosis; when we have seen this tropical country come into competition with the lands most favored by what used to be called a salubrious climate; when we contemplate all this work in the pride of Cuban nationality, we must feel deeply pained to hear it stated that the public treasury is employed by the Department of Public Health mainly to 'prevent the disease that may affect the stranger and more especially of American nationality.'"

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[1] Guiteras, J.: Tuberculosis in Cuba, Sanidad y Beneficencia, January-February, 1910, p. 6.

We believe that our Cuban confrères can afford to disregard the light affliction of an unjust criticism, which is but for a moment, seeing that the achievements of the past and the faithful cultivation of the opportunities of the future are sure to work for them a far more enduring weight of glory.

FOURTH OF JULY AND TETANUS ARE COMING

We await the returns from the coming Fourth-of-July casualty list with interest, but with only a moderate amount of optimism. After seven years' experience in the compilation of the statistics of this day of wanton bloodshed and slaughter, we have passed through the stage of righteous indignation and are resigned to doing our best, in the hope that some day the indignation that we have felt will become transmuted into public opinion that will lead to the long-urged reforms. There are not wanting signs that the awakening is coming. The public press, which has always taken an active part in the campaign, seems to recount more instances than in previous years of communities where something is being actually accomplished in the way of prevention. In many cities and towns citizens' committees or other organizations have secured reforms or prohibition of the sale of dangerous explosives, while in many places there has been substituted a program of public exercises and illumination far more fitting to the occasion of the anniversary of American independence than is the annual carnival of noise, smoke and bloodshed by which we have desecrated the day for so many years. Enough cities have tried with success the experiment of enforcing laws prohibiting the use of explosives on Independence Day to establish its feasibility, and it is within the power of every community to rid itself of this annual catastrophe; all that is needed is an efficient and clear-seeing chief magistrate, or a few active public-spirited citizens, or some energetic organization which sees its opportunity for service in this matter. Here is a place where medical societies have done good work in a few localities, and there is an unexcelled chance for efficient service by every society located in a town where dangerous methods of celebration are permitted; but some more active and persistent exertion than the passing of resolutions is required if results are to be obtained.

The wide-spread use which has been made of the statistical material collected by THE JOURNAL after each Fourth-of-July celebration is highly gratifying, and we shall continue the accumulation of statistics this year as before.

Last year we were disappointed by an unexpected and not inconsiderable increase in the number of tetanus cases, which fact incites us to continue the urging of vigorous prophylactic measures by physicians who attend to wounds received from explosives. Nothing less than thorough surgical cleansing, supplemented by a preventive dose of at least 1,500 units of tetanus antitoxin, should suffice to satisfy the conscience of any physician. Certainly the experience of the last six years has been conclusive enough as to the almost absolute protection afforded by tetanus antitoxin when given early to patients with properly treated wounds of this kind. It is a matter of some interest that nearly all the recorded cases of failure of tetanus antitoxin to prevent tetanus have occurred in Europe; the reason for these failures is almost certainly to be ascribed to the inferior quality of antitoxin which is on the market over there. Anderson[1] states that the tetanus antitoxin in use in this country, as tested by the Public Health and Marine-Hospital Service, showed much higher antitoxic value than most of the European specimens; the American antitoxins on the market before the adoption of a standard unit containing in different samples 434, 166, 77, 700, and 769 units per c.c., as contrasted with 40, 40, 83, 66, and 50 units in the French and Italian serums. In cases in which the wound does not heal well because of mixed infection, it is desirable to repeat the antitoxin, for, as Rowan[2] has pointed out, in these cases, the tetanus bacilli may continue to multiply in the pus-infected tissues until the injected antitoxin has been exhausted or eliminated, when there may occur a late development of tetanus.

There is nothing new to advocate in the matter of curative treatment, unfortunately. As ever, in the cases with a short incubation period the patients die with but few exceptions, while in those with longer periods of incubation the patients sometimes recover under the most diverse treatments. Free use of antitoxin is indicated, since it will at least neutralize such toxin as is free in the circulation and thus lessen the amount that will act on the nervous tissue; and there seem to be both theoretical and clinical grounds which support the practice of administering it by the intraspinal route when practicable. The use of magnesium sulphate, eucain, or other sedatives by the spinal route is still in the experimental stage, with sufficient favorable results on record to warrant trial by those who are competent to make and to observe such experiments.

ACCELERATIVE AND RETARDATIVE FUNCTIONS OF THE GLANDS OF INTERNAL SECRETION

Important and interesting facts have been brought to the attention of the medical world as a result of investigation into the functions of the ductless glands. It is to the correlation of these facts that we must look for a satisfactory understanding of the part played by these glands in the regulation and maintenance of life. The difficulties of research have been so many and the establishment of facts so gradual that progress in our knowledge of these glands has seemed slow. At present, however, there has accumulated a sufficient number of observations to render it probable that some insight into the workings of these obscure glands might result from an attempt to unify the isolated facts.

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[1] Anderson, John F.: The Commercial Preparations of *Tetanus* Antitoxin, THE JOURNAL A. M. A., Jan. 22, 1910, liv, 253.

[2] Rowan, Charles J., The Prophylactic Use of Tetanus Antitoxin, THE JOURNAL A. M. A., Feb. 12, 1910, liv, 533.

This work of unification has been very well begun by members of the Vienna school. They have pointed out the striking fact that, beside their own specific action, the ductless glands interact among themselves, and that any disturbance in the working of one results in an upset to the equilibrium of the rest; in consequence, the body metabolism is disturbed in many of its subdivisions—protein, carbohydrate, fat, and mineral. It has been the special service of this school to attempt an arrangement of the ductless glands into groups using disturbances of the metabolic functions of the body, to which they give rise, as a basis for classification.

On broad lines of function the ductless glands may be divided into two groups: (1) the accelerative, and (2) the retardative.

Into the first group fall the thyroid, the adrenals and the hypophysis. On study of the reactions of the body to injections of their prepared substances and on observation of experimental interference with their functions it has been found that all three increase protein exchange, the most marked effects being noticeable in the case of the hypophysis. The adrenals cause mobilization of the carbohydrates, and the thyroid leads to increased destruction of fat.

Into the second group fall the pancreas and the parathyroids. Both retard protein destruction, the pancreas being the more effective. Both likewise restrain the mobilization of carbohydrate; here too the pancreas is the more active. Likewise, the pancreas causes decrease in fat consumption.

A consideration of the relation of the ductless glands to mineral metabolism is of much interest. Feeding of thyroid tablets has been found to be followed by increased output of phosphates by the intestines, while feeding of hypophysis leads to a decrease in phosphates in the urine and an increase of the same in the feces. After the administration either of thyroid or of hypophysis extract, dogs show a great increase of calcium in the feces and of magnesium in the urine. With epinephrin it is different; the ratio of nitrogen to phosphorus pentoxid decreases and the calcium and sodium output is increased. The parathyroids exert a special restraining influence on calcium metabolism as shown by the increase in calcium in the urine and loss in the tissues when this gland is removed experimentally. Such findings suggest the inquiry whether the ductless glands directly influence the metabolism of the minerals of the body, or whether such changes are secondary results of some primary general disturbance. [illegible] in the [illegible]titative experiments alone can solve this

Guiteras says,[1]

land, Norway an the thyroid and of the parathyroids on statistics for 1909 are strikingly different from one

on of the parathyroids the galvanic irritability of the nerves decreases, while in dogs deprived of the thyroid it increases. This may possibly be brought into relation with the loss of calcium in parathyroidectomy, as calcium strongly decreases the irritability of the central nervous system.

Do the ductless glands have any influence on the blood? On this point some experimental findings are of interest. After epinephrin injection a leucocytosis develops, which is of the neutrophilic polymorphonuclear type; there is also a decrease in eosinophils. Thyroid extract likewise causes a decrease in eosinophils, which is slower to make its appearance, while hypophysis extract has no definite influence.

A comparison of the action of the glands in the same group has been fruitful. For example, both epinephrin and hypophysis extract, when injected into dogs, raise the blood-pressure, but the action of the hypophysis is slower and weaker. Hypophysis extract slows the heart but little while epinephrin does so powerfully. On section of the vagus nerve no change in rate takes place after hypophysis injection, while in the case of epinephrin a marked increase in rate comes on. Pituitary extract narrows the coronary arteries while epinephrin widens them; the opposite is true of the kidney vessels, a fact which probably explains the polyuria in some diseases of the hypophysis.

Do the ductless glands act through the discharge into the circulation of specific hormones? Such is the conception of Falta regarding the action of epinephrin, which he considers as having a special affinity for the sympathetic nerves. The mobilization of sugar in the liver is, according to his view, under the influence of the sympathetic, by mediation of the adrenals.

Though the observations on the activity of this group of glands are still meager, and their interpretation difficult, the work of unifying these results has already forecast important relations between them. The activity of many laboratories in this special field promises much for the future. Perhaps it is not too much to hope that, through the study of these glands, important light may be shed on the etiology and treatment of the still obscure metabolic diseases.

THE CARNEGIE FOUNDATION REPORT ON MEDICAL EDUCATION

So many marvelous things have been brought about in the domain of medical education during the past few years that great changes now seem commonplace and events of even greater magnitude would be taken as a matter of course. Nevertheless, all who are acquainted with the work which the Carnegie Foundation for the Advancement of Teaching has been doing in the investigation and standardizing of universities and colleges, have been awaiting with eager interest that body's report on medical education. The report has just appeared and undoubtedly will meet the highest expectations of those who have been watching for it.

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[1] Guiteras, J.: Tuber
January-February, 1910, p.

As has been stated in these columns,[1] the Carnegie Foundation was established in 1905 by Andrew Carnegie, who set aside a fund of $10,000,000 to provide retiring allowances and pensions for teachers in colleges and universities. At first, state universities were excluded, but later the endowment was increased by $5,000,000 in order that the benefits of the fund might be extended to them also. Realizing that not all institutions which call themselves colleges or universities are worthy of such titles, the foundation made an investigation of educational institutions in order to determine which were acceptable. Only the professors of such colleges as came up to the standards fixed by the foundation were eligible to receive pensions. Many of the universities found acceptable had medical departments and already not a few medical teachers have retired on Carnegie allowances. The Carnegie Foundation consequently stands for the advancement of medical teaching to quite the same degree as it stands for the advancement of teaching in other branches.

At the beginning, the investigations of the foundation were directed toward the college as the portion of the educational system most directly benefited by the endowment. This led to a study also of the university with its various departments, including the medical school. In the natural evolution of the foundation's work, therefore, medical education was taken up, and apparently at the psychologic moment, following as it did the first inspection made by the Council on Medical Education and being made simultaneously with the Council's second inspection. The reports of both of these bodies will have added importance, inasmuch as the two deal largely with the same problems.

The investigation of all the medical schools of the United States and Canada has been completed, and apparently with the same thoroughness as the study of other institutions in which the foundation has been interested. The foundation has quite properly taken the position that medical schools as well as colleges and universities are in truth public-service corporations, whether supported by taxation or private endowment; that the public has a right to know the facts concerning their equipment and ability to furnish education; and that only by a publication of the facts, unbiased by local ambitions or points of view, can the best interests of education be subserved. From the view-point of the needs and qualifications of the medical student and the interests of the general public, the foundation has examined carefully into the demand for physicians, the number of colleges necessary to satisfy that demand and the standards of preliminary education, teachers, laboratory equipment and clinical facilities which could reasonably be required of the medical schools.

Emphasis is laid on the fact that the social order is best served when the number of men entering a given profession reaches and does not exceed a limited ratio and that the present condition of the medical profession, overcrowded by ill-trained physicians, is very unsatisfactory. The illustration is used that "when six or eight ill-trained physicians undertake to make a living in a town which can support only two, the whole plane of professional conduct is lowered, and, in the struggle which ensues, each man becomes intent on his own practice, public health and sanitation are neglected, and the standards of the profession tend to demoralization." The best interests of the general public are certainly not best subserved under such conditions.

The report also suggests that with the present oversupply of medical schools, a state having no medical schools may be supplied with as good, or possibly better, physicians than other states which may possess several medical colleges, and that, at the present time at least, a community's best interests may be best served by the absence of medical colleges.

Regarding sectarian medicine, the foundation has taken the only logical position, namely, that, regardless of the method of treatment employed, all practitioners alike should have a thorough grounding in the fundamental medical sciences. Unless the physician is sufficiently well trained to make a proper diagnosis, treatment by any method would be mere guess-work, unscientific, and more apt to do harm than good.

This report is evidently the result of an enormous amount of painstaking work and is worthy the most careful study.[2] Coming from an agency outside and independent of the medical profession, it is sure to have a most profound influence on medical education in general, and claims of partiality or prejudice cannot be made against it. It is the more valuable since it comes from an agency whose function it is to investigate, compare and standardize all departments of education, technical and professional as well as general and collegiate, and indicates how the medical school, as a part of the educational system of our country, compares with the other parts of that system. If the conditions revealed by this extensive investigation are given a wide publicity, the result to medical education can be only good. The actual facts, in the end, will be more helpful than the poetry of the medical school catalogues and advertisements, especially to state licensing boards, some of which are now endeavoring to ascertain the actual character of the medical schools that send them applicants for license. Noteworthy forward steps, especially in the line of consolidation of medical schools, have already received effective encouragement from the Carnegie Foundation, and undoubtedly, this report will call the attention of men of wealth to the need of endowments for medical education. It is evident that the Carnegie Foundation is in a position in which it may exert a powerful and growing influence for good on the development of medical education in this country.

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[1] THE JOURNAL A. M. A., Aug. 14, 1909, p. 559.

[2] A copy of the report may be obtained by sending 17 cents, for postage, to The Carnegie Foundation 576 Fifth Avenue, New York City.

WOMAN'S MEDICAL COLLEGE OF BALTIMORE PERMANENTLY CLOSED

A letter from Dr. John R. Abercrombie, dean of the Woman's Medical College of Baltimore, informs us that, at a recent meeting of the faculty, it was decided to close that college permanently at the end of the present session. The reasons given are that sufficient funds were not available to make the improvements in the equipment and teaching facilities which the faculty considered essential and that the faculty preferred to close the college, rather than continue it as a medical college of other than the first rank, thereby preserving the excellent record maintained during the twenty-eight years of its existence. This is another instance in which faculty members have been willing to sacrifice personal interests that medical education might be improved, better standards prevail, and the public be provided with better trained physicians. After all, it is not strange that we seldom hear of such action as this being taken by colleges conducted solely for profit. It is almost invariably the colleges with higher ideals than those based on commercialism which, seeing the impossibility of maintaining those high ideals, voluntarily close. The colleges inspired by profit will enforce reasonable standards or close only when required to do so by state licensing boards.

THE ST. LOUIS SESSION

As we go to press the St. Louis session promises to be one of the most successful in the history of the Association. The weather is magnificent and augurs well, not only for a highly satisfactory Session, but also for the success of the outdoor entertainments planned. The first meeting of the House of Delegates was held Monday under the presidency of Col. Gorgas, and the usual routine business was transacted; the account of the proceedings appears on page 1963. A cordial reception was given to the visiting physicians. The registration on Monday was 1,400 and that number was greatly exceeded on Tuesday.

Medical News

ARKANSAS

Sanatorium for Odd Fellows.—The Arkansas Grand Lodge of Odd Fellows has selected a farm near Walnut Ridge, Lawrence county, as a site for a tuberculosis sanatorium for which $100,000 was devised under the will of the late A. W. Shiery, Little Rock.

Personal.—Dr. Morgan Smith, Little Rock, has been appointed assistant secretary for Arkansas, of the Rockefeller Sanitary Commission.——Dr. William W. Rice has been appointed president and Dr. Albert S. Buchanan, secretary of the Prescott Board of Health.

Commencement.—The fourth annual graduating exercises of the College of Physicans and Surgeons were held in Little Rock, April 29. Dr. C. H. Hoffman delivered the address to the graduating class which numbered 26 and the diplomas were presented by Dr. Joseph P. Runyan, president of the board of directors of the college.

County Society Meetings.—At the annual meeting of the Randolph County Medical Society, held in Pocahontas, April 21, Dr. John W. Brown, Swartz, was elected president; Dr. William E. Hughes, Pocahontas, secretary; Dr. Carl Scheidt, Pocahontas, treasurer; Dr. H. B. Hull, Ravenden Springs, delegate to the state society, and Dr. Thomas Z. Johnson, Holmes, alternate.——Howard County Medical Society at its recent meeting in Ashdown, elected Dr. W. M. Gibson, Nashville, president, and Dr. William H. Toland, Mineral Springs, delegate to the state society.

CONNECTICUT

Tuberculosis Farm Sanatorium Prospers.—At the sixth annual meeting of the New Haven County Antituberculosis Association, held at the Gaylord Farm Sanatorium, Cook's Hill, Wallingford, Dr. Edward T. Bradstreet, Meriden, was elected a director. The average number of patients under treatment during the year was 59, and the total number of patients treated 117. Up to date 1,007 have applied for admission to the sanatorium, of whom 668 were accepted. During the last year 62 patients remained at the sanatorium for less than three months, 50 of whom left the institution distinctly improved; 104 patients remained for three months, and of these 23 were incipient cases, of which 21 were discharged with the disease arrested; 75 patients came with the disease moderately advanced, and of these 51 were discharged with the disease arrested, and 11 improved; 6 patients came in a very advanced condition of the disease; in 2 of these the disease was arrested and in 2 the patients improved.

Societies Meet.—At the annual meeting of the Norwich County Medical Society, in Norwich, May 16, the following officers were elected: Dr. Patrick H. Harriman, president; Dr. Dennis J. Shahan, vice-president, and Dr. William B. Casey, secretary and treasurer, all of Norwich.——At the one hundred and eighteenth annual meeting of the Tolland County Society, held in Rockville, April 20, the following officers were elected: President, Dr. Cyrus E. Pendleton, Hebron; vice-president, Dr. Frank M. Dickinson, Rockville; secretary and treasurer, Dr. Elip P. Flint, Rockville; councilor, Dr. Thomas F. Rockwell, Rockville, and delegate to the state association and censor, Dr. Frank L. Smith, Stafford Springs.——At the meeting of the newly organized Connecticut Society of Social Hygiene, held in Hartford, May 14, Dr. Phineas H. Ingalls was elected president; Dr. Carles S. Stern, treasurer; Dr. Thomas N. Hepburn, secretary; Dr. Oliver C. Smith, chairman of the treatment committee; Dr. Frederick T. Simpson, chairman of the publication committee, and Dr. Alva E. Abrams, chairman of the educational committee, all of Hartford.

DISTRICT OF COLUMBIA

District Association Election.—At the annual meeting of the Medical Association of the District of Columbia, April 26, Dr. Noble P. Barnes was elected president; Dr. Edwin B. Behrend, vice-president; Dr. Luther H. Reichelderfer, secretary, and Dr. Frank Leech, treasurer.

Personal.—Dr. Thomas E. Satterthwaite, New York City, was a guest of honor at the annual dinner of the Washington Medical and Surgical Society, May 4, and delivered an address on "Some Newer Conceptions of Myocardial Disease."——Dr. Henry W. Miller, clinical director of the Government Hospital, Washington, has been appointed superintendent of the Maine Insane Hospital, Bangor.——Dr. Francis Dowling, Cincinnati, gave an illustrated lecture, May 27, before the U. S. Naval School, Washington, on "The Medical Giants of France." The occasion was the eighth anniversary of the founding of the school.

Pasteurized Milk Laboratory Opened.—Exercises attendant on the formal opening of the Nathan Straus Pasteurized Milk Laboratory were held at George Washington University Medical School, May 11. Hon. Jacob H. Gallinger, M.D., U. S. senator from N. H., presided and addresses were made by Surgeon-General Walter Wyman, Dr. A. D. Melvin, chief of the Bureau of Animal Industry, Hon John Johnson, commissioner of the district; Dr. William C. Woodward, health officer of the district; Dr. Milton J. Rosenau, professor of preventive medicine and hygiene in Harvard University, Dr. James H. M. Knox, Jr., Baltimore, president of the National Society for the Prevention of Infant Mortality, and Dr. Arthur R. Green, medical director of the Nathan Straus work in New York City.

INDIANA

Antituberculosis Society Organized.—The Deleware County Antituberculosis Association was organized at Muncie, May 5. Dr. William J. Molloy was elected vice-president and Drs. Hugh A. Cowing, Clarence G. Rea, Clay A. Ball and Earle S. Green were elected members of the executive committee.

Found Guilty.—Dr. Eugene V. Redlinger, Huntington, charged with incest and the crime of abortion on his stepdaughter, is said to have pleaded guilty to the charge of abortion, April 29, and to have been sentenced to be imprisoned in the penitentiary for a term of from three to fourteen years and to pay a fine of $500.

District Society Meetings.—At the annual meeting of the Twelfth District Medical Society, held in Fort Wayne May 17, the following officers were elected: President, Dr. Fred A. Metts, Ossian; vice-presidents, Dr. Douglas A. Swartz, South Whitley, and Dr. Woodward H. Hayes, Albion, and secretary and treasurer, Dr. Garrett Van Sweringen, Fort Wayne. In the evening Dr. Mazyck P. Ravenel of the University of Wisconsin delivered an address on "The Transmission of Bovine Tuberculosis to Man."——The Ninth Councilor District Medical Society held its annual meeting in Tipton, May 20, and elected the following officers: President, Dr. Andrew S. Dickey, Tipton; vice-presidents, Dr. Edgar Cox, Kokomo, and Dr. William J. Fernald, Frankfort; secretary-treasurer, Dr. Paul J. Barcus, Crawfordsville, and assistant secretary-treasurer, Dr. George T. Williams, Crawfordsville. The next meeting of the society will be held in Kokomo.——The sixth annual meeting of the Indiana Fourth District Medical Society was held in Lawrenceburg, May 27. Dr. John P. Ward, Vevay, was elected president; Dr. John Elfers, Rising Sun, vice-president; Dr. Curtis Bland, Greensburg, and Dr. James H. Green, North Vernon, treasurer. The next meeting will be held in Greensburg.

MARYLAND

Personal.—Dr. J. Frank Miller, a graduate of the Baltimore Medical College, 1909, has opened an office in Reisterstown, Baltimore county.

Aged Physician Convicted.—Dr. David W. Jones, Hagerstown, is said to have been found guilty, May 25, of attempted malpractice on a young woman and to have been sentenced to pay a fine of $100 and costs.

Tuberculosis Sanatorium Managers Meet.—The managers of the Maryland State Tuberculosis Sanatorium at their annual meeting, May 19, reelected Dr. H. Warren Buckler, Baltimore, vice-president; Dr. Victor F. Cullen, state sanatorium superintendent, and Drs. Edson M. Glidden and W. Miles Garrison, assistants.

Health Officers Appointed.—The following have been appointed health officers of Carroll county: Taneytown, Dr. Franklin H. Seiss; Uniontown, Dr. Luther Kemp; Myers, Dr. Levi Wetzel; Woolery's, Dr. Robert F. Wells; Freedom, Dr. Milton D. Norris; Manchester, Dr. John F. B. Weaver; Westminster, Dr. Charles R. Foutz, for the district and at large; Hampstead, Dr. Richard C. Wells; Franklin, Dr. Edwin D. Cronk; Middleburg, Dr. Charles H. Diller; New Windsor, Dr. George H. Brown; Union Bridge, Dr. James Watt; Mount Airy, Dr. William E. Gaver; Berrett, Dr. Daniel B. Sprecher.

MASSACHUSETTS

Bequest to Hospital.—By the will of the late Mrs. Annie Prescott Lincoln, Boston, $25,000 is devised to Grace Hospital, formerly Emergency Hospital, Boston, for a bed to be maintained in memory of her husband, Joseph Bates Lincoln.

District Medical Society Elects Officers.—Berkshire District Medical Society, at its annual meeting held in Pittsfield, May 3, elected the following officers: President, Dr. Harry B. Holmes, Adams; vice-president, Dr. Clifford S. Chapin, Great Barrington; secretary, Dr. Isaac F. Dodd, Pittsfield; treasurer, Dr. Joseph D. Howe, Pittsfield; trial commissioner, Dr. John J. Hassett, Lee; councilors, Drs. James F. A. Adams, Pittsfield; Lyman A. Jones, North Adams, and Orland J. Brown, North Adams, and censors, Drs. James F. A. Adams, Pittsfield; Albert T. Wakefield, Sheffield; Martin M. Brown, North Adams, Stephen C. Burton, Pittsfield, and John B. Thomas, Pittsfield.

NEW YORK

Public Health Association.—The Rochester Public Health Association held its annual meeting, May 10, and adopted resolutions commendatory of the stand taken by the local officials for the preservation of the cleanliness of the city and for proper sanitation. Dr. Montgomery E. Leary was elected secretary and supervising director of the association.

Attempt to Defeat Undesirable Bill.—A bill has been presented to Governor Hughes and to Mayor Gaynor which changes the existing medical law in regard to the fines imposed on violators of the medical law. At present when violators are successfully prosecuted the fines go to the Medical Society of the County of New York for the support of its work in seeking out offenders. The new bill adds, "Provided, however, that in the City of New York no fines shall be paid to any such societies, but shall belong to the said City of New York." At the present time practically the only check on unlicensed practitioners, midwives, druggists selling abortion drugs, quacks, corporations advertising the practice of medicine by unknown physicians, and fakers of all kinds who practice medicine under the cloak of religion or occultism, is the active prosecution of the Medical Society of the County of New York and hence it is urged on all the members of the county society that they use their influence to prevent the passage of this bill.

New York City

Smallpox in Manhattan.—Five cases of smallpox were recently detected in a tenement in Harlem. It was found that many persons had been exposed and the Board of Health made over 500 vaccinations in the immediate neighborhood.

Crusade Against Wood Alcohol.—The first cases in the present campaign against wood alcohol that is being conducted by the Board of Health have been found guilty and fined $100 and $150 for selling adulterated whisky. Of the samples collected on the East Side and analyzed, 20 per cent. were found to contain wood alcohol. Several cases have been put over as it is expected that the United States government will take some action against the wholesalers who have sold the poison to the retailers.

Inebriate Bill Signed.—Mayor Gaynor has approved the bill passed by the legislature which permits the board of estimate to establish a commission for dealing with inebriates and a hospital and industrial colony to be used for the reformation of drunkards. It has been stated that the board of estimate will not furnish money for the scheme as drunkenness is decreasing very markedly in recent years and it is claimed that present educational and social work is largely doing away with the evil.

A New Move to Guard Public Health.—Dr. Charles Mallory Williams, Executive Librarian of the New York *Academy of* Medicine has asked for a collection of the reports of committees appointed at various times to investigate questions of public health so that they may be available for workers. Dr. Williams would like to have the reports of investigations along such lines as harbor pollution, the alcohol question, the prevention of tuberculosis and of occupational diseases and the sanitation of tenements.

To Establish Optometry Course.—Columbia University has just sent out announcements that it will start the first optomety course to be offered by any college or university in this country. The course will begin in September and intends to equip graduates so that they may examine people's eyes and fit glasses, but they are not to use drugs. The course will be made a part of the department of physics. The Michigan State Optical Society has telegraphed that it will give the first free scholarship in the new course.

Free Dentistry for School Children.—The free dental clinic that was established in January on One Hundred and Twenty-first street to care for the teeth of school children has completed its first four months of work. During this period more than 5,000 school children have been treated. The Department of Health maintains the clinic and children are not treated until a personal visit has been made to the home of the child to see that the parents are unable to pay for treatment. Dr. S. Josephine Baker, chief of the division of child hygiene, states that out of 323,000 school children examined during the 1908-09 school year 183,000 had defective teeth.

New Hospital Building for Post-Graduate Medical School.—Work has been commenced on the new building for the New York Post-Graduate Medical School, which is to cost $6,000,000, making the institution's capacity about 400 beds. The building proposed is to be twelve stories in height and will include a tower with rooms for fifty private patients and a pavilion on the roof for open-air treatment. A loggia on three floors open to the street front and to the rear is also planned, where beds can be kept permanently with exposure to the air. In addition, three long balconies to the eastward are proposed, and the entire top of the main building, seven stories high, with the exception of the space taken up by the tower, will be occupied by a roof garden, so that unusual provision will be made for giving the patients fresh air. There are to be eight small operating rooms and a number of well-equipped laboratories for research work. After the new building is completed the present quarters of the Post-Graduate, adjoining, will be converted into a nurses' home in connection with the college.

Buffalo

Commencement Exercises.—The annual commencement exercises of the Medical Department of the University of Buffalo were held May 27 when a class of thirty-eight received diplomas. Dr. Matthew D. Mann delivered the Doctorate address.

Dinner to Dr. Mann.—A dinner was given to Dr. Matthew D. Mann by the Alumni Association of the University of Buffalo, May 26, on the occasion of Dr. Mann's retirement as Dean and Professor of the department of Obstetrics and Gynecology. A loving cup was presented to Dr. Mann by the faculty of the University with suitably embossed resolutions by the graduating class on it.

Personal.—Drs. Roswell Park, Charles Cary and Gustav Hitzel, Buffalo, have started for Europe.——Dr. Roswell Park, Buffalo, has resigned as a trustee of the J. N. Adam Memorial Hospital.——Lieut. Col. Albert H. Briggs, major of the 65th Infantry, N. G. N. Y., has been promoted to Chief Medical Officer of the 4th Brigade and Dr. Nelson G. Russell has been appointed Surgeon of the regiment with the rank of Major. Dr. Carroll J. Roberts has been promoted to Captain and Assistant Surgeon and Dr. William T. Getman has been appointed Assistant Surgeon with the rank of 1st Lieutenant.

PENNSYLVANIA

Negroes League Against Tuberculosis.—Fifty of the leading negroes of western Pennsylvania on May 21 applied for a charter for the Negro Tuberculosis Hospital League, to provide separate tuberculosis sanatoria in the state for the afflicted of their race. The tuberculosis hospitals of the state refuse to admit them, although such hospitals which have state aid, are willing to and do furnish milk, eggs and other foodstuffs needed by negro consumptives in their homes. It is the intention to raise a fund to get state aid to erect one hospital near Philadelphia and another near Pittsburg.

Philadelphia

Personal.—Surgeon-General George H. Torney, U. S. A., and Surgeon-General Charles F. Stokes, U. S. N., will be the guests of honor at a reception given by the Medical Club of Philadelphia, at the Bellevue-Stratford Hotel, Friday evening, June 17.——Dr. J. H. Parson, of London, England, the official guest of the Section on Ophthalmology of the American Medical Association, was the guest of honor at a dinner given by Dr. George E. de Schweinitz at the Bellevue-Stratford Hotel, May 31.——Dr. Alfred Saenger, Hamburg, Germany, was the guest of honor at a dinner given by Drs. Francis X. Dercum and Charles K. Mills at the Art Club on May 31.——The honorary degree of LL.D. was conferred on Dr. S. Weir Mitchell by Jefferson Medical College at the annual commencement exercises, June 6.

Hospitals in Philadelphia Improved.—More than fifty hospitals at present supply the physical and teaching requirements of this medical center, and these plants are undergoing constant expansion. The Rush Hospital for the Treatment of Consumption and Allied Diseases, at Lancaster avenue and Thirty-third street, on May 21, opened for inspection of the public the newly completed portion of its intended group of buildings. The University Hospital on May 12 broke ground for a new group of laboratory structures at Pine and Thirty-seventh streets. A new section of the Nurse Training School dormitories (with capacity for 40 additional nurses) at the Philadelphia General Hospital, Pine and Thirty-fourth streets, was opened May 12.

VIRGINIA

Northern Neck Physicians Hold Meeting.—At the annual meeting of the Northern Neck Medical Association, the following officers were elected: President, Dr. Andrew C. Fisher, Emmerton; vice-presidents, Drs. C. T. Pierce and Loren E. Cockrell, Reedville; secretary, Dr. Robert O. Lyell, Warsaw, and treasurer, Dr. Walter N. Chinn, Hague.

Personal.—Dr. Roscoe C. Carnal, Ballsville, has been appointed hookworm inspector for the district composed of the counties of Princess Anne, Norfolk, Nansemond and Isle of Wight.——The Norfolk school board has elected Drs. Julian A. Norfleet, S. Roszel Donohoe, Millard P. Doyle and J. Judd Miller medical examiners for the public schools of the city.

WASHINGTON

State Medical Board Appeals.—The State Medical Board, on May 13 gave notice of appeal to the Supreme Court from the decision of the Superior court of King's county ordering the Board to grant a physician's license to Mrs. Lucile Berfield Hazzard, a woman who is said to have used starvation methods in treatment of disease.

Hospital Corner Stone Laid.—The corner stone of the new Providence Hospital, Seattle, was laid with impressive ceremonies by the Bishop of Seattle, May 1.——The contract for the addition of a new wing to St. John's Hospital, Ketchekan, has been awarded. The wing will be two stories in height and will contain operating rooms, wards, private rooms, etc.

Personal.—Dr. J. Earl Elsie, Pullman, has been elected delegate to the state medical society and Dr. William B. Palamountain, Colfax, alternate.——Dr. Elisha B. Schrock has resigned as a member of the staff of the Municipal Hospital, Seattle, and has been succeeded by Dr. J. M. Lea; Knoxville, Tenn.——Dr. James A. LaGasa, formerly Commissioner of Health of Tacoma, was operated on for appendicitis, May 4, and is reported to be doing well.

Tuberculosis Notes.—Two lots in the town of Glacier have been deeded to the Whatcom County Anti-Tuberculosis Society on which it is hoped that a sanatorium will be established in a short time.——The Everett Anti-Tuberculosis Society at its annual meeting elected Dr. Albert P. Duryee a director.——Whatcom County Anti-tuberculosis League was organized at Bellingham, April 28, and the following physicians were elected to office: President, Dr. Edward C. Ruge, Bellingham, and directors, Drs. Orville E. Beebe, Everson, and Spencer S. Howe, Lynden.

WYOMING

Will Prosecute Illegal Drug Sellers.—The State Board of Medical Examiners, at its quarterly meeting, adopted resolutions setting forth that hereafter it would revoke the certificate of any physician who violates the laws of the state by selling cocain or other drugs to drug addicts.

Personal.—Dr. F. Di Giacomia, Rock Springs, is said to have been adjudged insane and committed to the state hospital at Evanston.——Dr. Harry H. Ainsworth, Cody, who was operated on recently for appendicitis, is reported to be convalescent.——Dr. William A. Wyman has been elected president, Dr. George L. Strader, secretary, and Dr. Otto K. Snyder, treasurer, of the medical staff of St. John's Hospital, Cheyenne.

GENERAL NEWS AND COMMENT

Physicians of Virginia and the District Meet.—The medical societies of Northern Virginia and the District of Columbia, at their annual meeting in Manassas, Va., elected the following officers: Dr. A. Barnes Hooe, Washington, president; Dr. A. H. Coombs, Fairfax, Va., recording secretary; Dr. Charles S. White, Washington, corresponding-secretary, and Dr. Frederick M. Brooks, Fairfax, treasurer.

Southern Railway Surgeons Meet.—The fifteenth annual meeting of the Association of Surgeons of the Southern Railway was held in Richmond, May 24-26, under the presidency of Dr. Charles H. Starkel, Belleville, Ill. Among the interesting topics of discussion were the address of Surgeon Charles P. Wertenbaker, U. S. P. H. and M.-H. Service on "Sanitation of Railway Stations," and the paper of Dr. Henry T. Bahnson, Winston-Salem, on "Alcohol as a Dressing for Wounds." The Samuel Spencer Memorial Address was delivered by Dr. Lucien Lofton, North Emporia, Va. The Owen Bill calling for the establishment of a federal department of health was unanimously endorsed. Mobile was selected as the next meeting place. The following officers were elected: President, Dr. William C. Day, Danville, Va.; vice-presidents, Drs. H. J. Milliken, R. A. Smith, Hales Mill, Va.; Ambrose McCoy, Jackson, Tenn., and James P. Salb, Jasper, Ind.; secretary and treasurer, Dr. Jacob U. Ray, Woodstock, Ala., and member of the executive committee, Dr. Jay H. Durkee, Jacksonville, Fla.

Meeting of National Association for the Study and Prevention of Tuberculosis.—The sixth annual meeting of the above association, held in Washington May 2 and 3, was briefly reported in The Journal, May 14, page 1621. The resolution in regard to the pasteurization of milk placed the association on record as favoring clean milk and declaring that pasteurization is valuable where certified milk cannot be obtained, but that the process should be carefully supervised. The same resolution, however, declared that tuberculosis of the glands and lymph nodes in children, or other forms of tuberculosis are rarely caused by infection from bovine sources. Dr. William H. Park, of the New York Health Department, also showed in his paper that from a careful study of 400 cases of tuberculosis of all types chosen at randon, only 2.5 per cent. of tuberculosis in New York comes from infected milk, butter or meat, and this small percentage is found mainly in children and that tuberculosis in adults therefore comes from human beings. His conclusions were confirmed by about 500 cases studied in other parts of the world. Considerable interest was manifested in the paper of Dr. Lee K. Frankel, of New York, on the compulsory establishment of a fund from the wages of workmen to provide for their fellows who become afflicted with tuberculosis. Dr. Frankel believed this feasible and constitutional, but that a system of voluntary insurance would be impracticable. Dr. Livingston Farrand, executive secretary of the national association, reported that since May 1, 1909, the number of state and local antituberculosis associations has increased from 297 to 431, a gain of 134; the number of special dispensaries from 222 to 286; the number of sanatoriums and hospitals from 294 to 393, and the number of beds for tuberculosis cases from 15,244 to 22,720, a gain of 7,476. Eleven state legislatures in session since that time have enacted some law with reference to tuberculosis.

FOREIGN

Other Deaths in the Profession Abroad.—Besides the losses in the profession mentioned elsewhere, the death of the following eminent medical men should be recorded: E. van Beneden, professor of zoology at the university of Liège, Belgium, and founder and editor of the *Archives de Biologie*, noted for his important research on embryology, comparative anatomy and histology, president of the Belgian academy of sciences, corresponding member of five other academies, and recipient of honorary degrees from five British and German universities. His studies of hookworm disease and suggestions for prophylaxis were instrumental in stamping out the disease in the Belgian mines. The institute of zoology at Liège became under his guidance one of the foremost research laboratories of Europe.——E. L. V. Oedmannson, until recently professor of skin and venereal diseases at the university of Stockholm.——V. Mirbelli, professor of skin and venereal diseases at the university of Parma, Italy, one of the leaders in his specialty in Italy.——Although not a member of the medical profession, the death of S. Cannizzaro at the age of 84 may be mentioned in this connection, as his research on organic chemistry, the specific heat of elements, the distinction between atoms and molecules, his work on benzyl alcohol, etc., have aided in the solution of medical problems. He was professor of organic chemistry in the university of Rome and a senator of the realm.——C. Zanghello, an Italian physician, recently succumbed to bubonic plague at his post in the isolation hospital at Djeddah on the Red Sea, another victim to professional duty.

LONDON LETTER

(*From Our Regular Correspondent*)

LONDON, May 28, 1910.

The Study of Tropical Diseases

Sir Francis Lovell, dean of the London School of Tropical Medicine, has returned to this country after a tour extending over five months in the West Indies for the purpose of interesting those colonies in the work of the school and obtaining subsidies from them in aid of research work in tropical disease. He visited Barbados, the Windward and the Leeward Isles, Jamaica, Trinidad and British Guiana, at all of which places he was received cordially by the authorities and promised grants for the school. The total amount is about $2,500 a year for the next five years. Since its establishment ten years ago the school has trained 1,100 postgraduates in the study and investigation of tropical diseases. The income from fees and subscriptions is not sufficient to defray the cost of ordinary instruction, so that if research work is to be carried out on an adequate scale grants of some kind are necessary. The school has recently sent an expedition in charge of Dr. Bahr to Fiji to study tropical dysentery and another to Bagdad in charge of Dr. Wenyon to study "Delhi boil," which has been found to have some connection with kala-azar.

The Survival of Bedbugs

The length of time which bedbugs can survive without food is a point of practical importance. It has arisen in connection with the use of flock bedding made from filthy rags without disinfection. It was thought that, whatever its dangers, such flock would not contain living bugs as these animals were incapable of surviving many days without food. A correspondent of the *British Medical Journal*, Dr. W. Habgood, a health officer, has pointed out that this is not true. On having a house cleaned Sept. 1, 1909, he had 25 bugs collected in a clean bottle in which was placed a piece of clean white paper and clean calico. The mouth of the bottle was covered with a piece of clean calico. On October 26 all were alive. On Jan. 21, 1910, three or four old ones and one young one were alive. On February 26, nearly six months after capture, one large bug was running actively over the paper after the bottle had been warmed. The doctor's object in making the experiment was to find out whether the statement made by new tenants of a house that had been empty for months that bugs were there before their arrival was true.

The Development of Specialism

Like everything new the development of specialism in this very conservative country met with great opposition. Many specialties such as laryngology, proctology and genitourinary diseases were at first regarded with disfavor. They were long unrecognized by the large general hospitals and had to establish themselves at first in small hospitals built for the purpose. The force of events has proved too strong for the conservatives and also for the law of differentiation of advancing knowledge which evolutionists teach is being continually exemplified here as elsewhere. Still the suspicion with which specialists have been regarded has not wholly passed away. One of the most famous of the London hospitals—Guy's—has just made a remarkable advance in the recognition of specialism. The magnitude of the change will be appreciated by looking back on its history. Not until 1824, a century after its foundation, did any special department exist. In that year the ophthalmic department was created. In 1833 the electric department was established; in 1842 the obstetric department; in 1885 the throat department, and not until 1907 the orthopedic department. In this, as in many of the London hospitals, a general physician or surgeon might hold an appointment in the special department. Thus a general physician might be the dermatologist or a general surgeon the laryngologist. Now it has been decided to establish in Guy's Hospital a number of appointments which can be held only by specialists. These are to be appointed for diseases of the ear, throat, genitourinary organs and orthopedics. The reason is given that for the first three such special skill in the use of instruments is required for diagnosis and operations that it can hardly be expected in one who also practices general surgery. Special departments are also to be created for nervous diseases and diseases of children, but specialists are not necessary for these appointments, which may be held by general physicians. The beds of the hospital are to be rearranged so as to provide increased accommodation for these specialties.

Medical Entomology

The secretary of state for the colonies has appointed an "Entomological Research Committee" for tropical Africa for the purpose of organizing and coordinating the investigations of the numerous insects which from time immemorial have been the bane of that country. The committee is publishing a valuable periodical called the *Bulletin of Entomological Research*. Arrangements have been made by which the committee will be kept in touch with the organizations for the study of entomology that exist both to the north, in the Soudan and Egypt, and to the south in Rhodesia and the South African states. The number of known species of insects in tropical Africa has increased enormously. According to Dr. Shipley in 1830 the number of insects described and named was under 50,000; by 1881 it had risen to 220,000; now the number has reached 450,000 and thousands more await classification and description in collections deposited in museums, where no one has had time to work them out. It is calculated that the yet uncaptured species run into millions. To promote the work of sorting and studying the life-cycles of these insects two entomologists have been despatched, one to East Africa and the other to West Africa. They will instruct the residents, especially the government servants, in the methods of collecting and studying ticks and insects and of preserving them for transmission home. So far as is known many large genera, such as Lepidoptera and Neuroptera, exert but little influence on human affairs.

New X-Ray Department of the London Hospital

A new *x*-ray department has been completed at the London Hospital and is now in use. The most modern equipment has been provided and neither trouble nor expense has been spared. In 1899 the rays were first used therapeutically in the hospital for the treatment of lupus vulgaris. Since then many changes have been made. The old platinum hammer break and accumulator have been replaced by a copper rod and mercury bath transformer. The coils now used are much heavier and the quality of the x-ray tubes has been considerably improved. Formerly exposures were given by time, that is, for so many minutes. Now Sabouraud's pastilles are used. They are flat discs of platino-cyanid on cardboard. When exposed to the rays their bright green color turns first to yellow, then to orange, and finally to red. The pronounced orange color is called the "B dose" and is taken as the standard. This dose causes temporary epilation without permanent alopecia and does not produce dermatitis. Hence its value in the treatment of tinea tonsurans. In carcinoma stronger doses are given. Usually these are filtered through a sheet of aluminum or leather so as to allow the passage of only the higher rays, thus obtaining a deeper reaction and preventing dermatitis. There are four cubicles in the department, each fitted with a separate installation. The walls of these cubicles which reach from floor to ceiling, are made of lead and iron one-fourth inch thick, faced on both sides with pine. In these are windows of lead glass for observation purposes. This glass has been thoroughly tested and is impervious to the passage of the rays. The whole of the installation, except the controlling and driving gear, is inside the cubicle. When the patient and apparatus have been suitably arranged the operator comes outside the cubicle, shuts the door and switches on the current. Any movement or change of expression of the patient can at once be detected through the window. If the operator opens the door the current is stopped automatically. When the necessary number of revolutions of the motor have been made the current similarly stopped and an electric lamp over the cubicle is illuminated, thus attracting the operator's attention should he for the moment have been called to another part of the room. By these arrangements it is believed that the intractable dermatitis with its consecutive cancer from which so many operators have suffered will be prevented. The number of patients treated daily in the department amounts to from 35 to 40.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 20, 1910.

Admission of Foreigners to the Concours of the Externship and Internship of Hospitals

Unlike certain other countries where foreigners not infrequently occupy university chairs, France does not permit foreigners to hold any post, no matter how modest, bestowed by the national government. The apparent exceptions presented by the positions of hospital extern and intern are accounted for by the fact that these places are bestowed, not by the national government, but by the Public Charities or the municipalities. The bestowal of these positions, however, has aroused protest recently. The question has just been discussed in the Réunion médico-chirurgicale des hôpitaux de Bordeaux. The society wisely admitted that the great number of the candidates enrolled for the concours of the externship and internship of hospitals must stimulate the zeal of all the competitors; that, moreover, an admission of foreign students would serve to disseminate the renown of French medical science in all parts of the world; and that, consequently, the higher patriotism would authorize this admission.

The Suppression of Fraud in Foods

In order to suppress fraud and to guarantee to producers and to honest retail dealers the protection which they deserve, the minister of agriculture has just taken two interesting measures. In the first place, each year at the end of November, there are to be collected at the mayor's office of each wine-growing commune two series of samples of the wines of that harvest. The first series is to be reserved for the departments of agriculture and finance, which cooperate in the suppression of frauds; the second is for the use of the judicial tribunals, in the expert examinations which may be ordered. Thus wines which are under suspicion may at any time be compared with authentic samples. The second innovation has to do with dealers in foodstuffs, who often have trouble through unwittingly selling adulterated foodstuffs. Hereafter the commercial organizations may nominate, subject to the approval of the prefect, an agent paid by themselves who, on requisition of the members, will take samples out of goods on their arrival at the transportation terminal. These samples, to the number of four, are to be ticketed, sealed, registered and deposited in a place designated by the association. If, later on, foodstuffs which are below standard are seized at the retail dealers, comparison with the samples will clear up the question of culpability.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 19, 1910.

Personals

At the annual meeting of the German laryngologic society a few days ago, the prize founded on the occasion of the seventieth birthday of Prof. B. Fraenkel, was awarded for the first time; it was given to Professor Killian of Freiburg for his notable work in laryngology.

The Siebel prize, given by the Senckenberg foundation in Frankfort a. M. for the best work on children's diseases or embryology published in the last four years, has been awarded to the Berlin pediatrist, Professor Finkelstein, for his investigations on alimentary intoxication.

Women Students

The number of women attending the Prussian universities in 1910 has risen to 2,824 as compared with 1,680 in 1908-09. The women students in the medical department numbered 266 as opposed to 188 in 1908-09.

The Number of Lepers

The number of lepers in the German empire at the end of 1909 amounted to 23 (1908: 25), of whom 18 were in Prussia, 4 at Hamburg, and 1 in Bavaria.

The Campaign Against Mosquitoes

As the destruction of the larvæ of mosquitoes in water can not be accomplished on certain lakes and ponds by the use of petroleum or the establishment of drainage on account of the cost, it is recommended by a ministerial decree, based on research by Professor Schilling in the institute of infectious diseases, to encourage the increase of the natural enemies of the mosquito larvæ. The so-called water beetle (the *dyticus*, *nepa* and *notonecta* species), the stickleback (*Gasterosteus*), the small water salamander (*Triton taeniatus*) and the larvæ of dragon flies are the best destroyers of mosquito larvæ. It is recommended to protect the enemies of the mosquito and to introduce them in pools where they are not present, especially during the winter. It is also important to destroy the mosquitoes which are hibernating during the winter. As mosquitoes in the beginning of winter resort to the cellar, stable, etc., and cling to the walls and ceiling, they can easily be smoked out of their resting places and killed with a good insect powder.

Museum for Infant Hygiene in Munich

The headquarters for the care of infants in Bavaria contemplates the establishment of a permanent museum for infant hygiene. The government has made the first contribution of $360 (1,500 marks) and has placed rooms at its disposal. The museum which will be the first of its kind in Germany is for the purpose of spreading information regarding the need and the prospects of the fight against the excessive infantile mortality among the lower classes of the population. The museum is to be simple and adapted to the common people and so organized that parts of it can be transported to other parts of Bavaria as traveling expositions or to illustrate lectures. The various departments comprise (1) infant hygiene, (2) the extent and causes of infant mortality, (3) the development, structure and function of the infant's body, (4) infantile nutrition, (5) care of infants, (6) children's diseases, (7) vaccination, (8) milk, (9) public and private care.

Mothers' Home at Hamburg

The Hamburg league for the protection of mothers contemplates the foundation of a small home for mothers, especially with the aid of a small legacy of $12,000 (50,000 marks) that has fallen to it. The home is to possess at most 20 beds. It will be limited to economic aid and not serve like the home in Bremen for charitable purposes. For instance, the three months' gratuitous care of mother and child as is the custom in Bremen will not be provided for, but the mother will be given the opportunity to earn her way by the provision of sewing, washing and similar work. Homeless pregnant women, for the most part illegitimate mothers, are received. Delivery will occur in the hospital. After dismissal from the hospitals which takes place twelve days after delivery, puerperal women in need of convalescent care will be received into the home for mothers. The price for bed and room is 8 cents (30 pfennigs), for board 12 cents (50 pfennigs) per day. Each woman must furnish her own crib.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, May 23, 1910.

Housing of the Poor

To provide cheap and healthful housing for the poor, a law has been passed in Austria which authorizes the government to devote a sum of 6,000,000 kronen (about $1,500,000) every year from 1910 till 1920 for the purpose of giving loans free from all duties and interest to such building-societies as will erect small lodging-houses. The idea has been much agitated by the Society for Prevention of Tuberculosis. The management of the fund mentioned above will be in the hands of a joint committee, selected by the government and the society. Special regulations will be imposed on the building companies. Each room will have to contain at least 30 cubic meters of air-space per person living in it. No back yard will be allowed of less than 6 meters' depth, thus giving a clear space of 12 meters (13½ yards) between two back windows of opposite houses. The houses will be two stories high. Up-to-date water-closets, kitchens, and arrangements for dust-removal are also required. The latter point is especially well worth mentioning, for it is a constant outcry of the hygienic authorities in this city that the present mode of removing household refuse here is shamefully primitive. No home work except domestic household labor and light sewing will be allowed in these lodgings. Playgrounds for children, kept free from dust, are also to be provided. It is intended to give the loans in the first place for the relief of the population in Vienna, Prague, Graz and a few industrial cities where tuberculosis is present.

The First Fight Between Practitioners and Krankenkasse

Owing to the "social reform" bill which threatens the profession with very severe losses of the material whence to obtain private practice, a preliminary trial has been made to see whether the organization of our profession is efficient enough for the coming events. In industrial towns in Lower Austria, differences of opinion as regards remuneration of clubwork, as well as to the eligibility of a member to the club, prompted the practitioners to refuse all work for the *Krankenkasse*. The patients were informed that they would be treated at reduced rates, but not on behalf of the *Kasse*. The managing board of the club (*Kasse*) tried in vain to obtain the services of other doctors; the medical organization proved effective and thus the club had to make its terms with the practitioners. It was agreed that, in future, appointments of doctors will be negotiated through the medical council, thus insuring uniform rates of payment and recognition of the right of the practitioner to apply against orders of the board of the club to the Council. The result of this fight shows that if the social reform bill should become law the profession has it in its power to turn it into a weapon for its own good.

Pharmacology

[Contribution from the Chemical Laboratory of the American Medical Association.]

HYMOSA

W. A. Puckner and W. S. Hilpert

Frequent requests for information regarding the composition of hymosa, manufactured by the Walker Pharmacal Co., St. Louis, and a perusal of the extensive and nostrum-like advertising the product is receiving, made the chemical examination of the preparation seem desirable. If the label is to be believed, hymosa has been of use in "acute and chronic muscular and articular rheumatism, gout, sciatica, lumbago, pleurodynia and neuralgia, whether due to uric acid diathesis or not . . . "

The composition of hymosa as given by the proprietors is set forth in the following statement:

> ". . . Hymosa, in which the remedies Frangula, Actea Spicata, Stellaria Media, Franciscea Uniflora, Rhus Toxicodendron, Passiflora Incarnata, Phytolacca Decandra and Echinacea Angustifolia are combined in the proportions which experience has shown will obtain the quickest and best results without any of the stomach and heart complications so often following the administration of salicylic acid."
>
> "Contains no Salicylic Acid."

Thus the explicit statement is made that hymosa contains certain vegetable drugs (most of them obsolete and valueless) and that it does not contain salicylic acid. By inference the claim repeatedly is made that the nostrum does not contain any salicylates.

> ". . . Hymosa has achieved most remarkable results in overcoming rheumatism in cases where salicylates have been tried in vain . . ."
>
> "Salicylic acid was not successful in this case of rheumatism of the stomach."
>
> "Negative results from salicylates—Hymosa cures."
>
> ". . . the salicylates didn't help? Then we must try Hymosa."

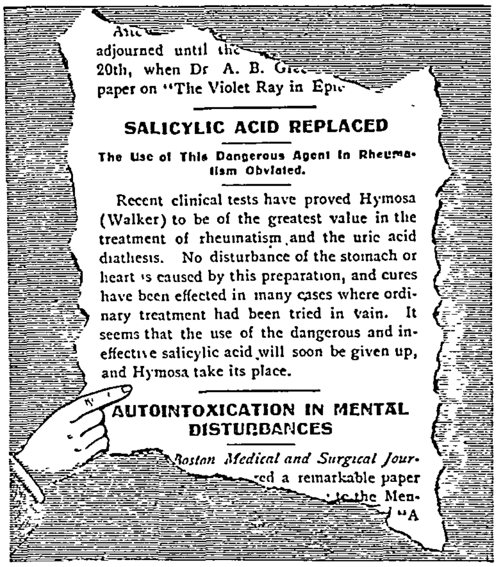
Still harping on the undesirability of salicylates and the value of hymosa the advertising pamphlets state:

> "Salicylic Acid Replaced. The Use of This Dangerous Agent in Rheumatism Obviated."
>
> "It seems that the use of the dangerous and ineffective salicylic acid will soon be given up and hymosa take its place."
>
> "Former methods of treating rheumatism . . . have been very unsatisfactory . . . because of the heart and stomach difficulties brought on by salicylates of which most rheumatism remedies are composed."
>
> "Could not tolerate the salicylates."

Finally in a letter issued to physicians we are told:

> ". . . you will find hymosa to possess prompt and positive curative action with the additional advantage of avoiding the heart and stomach complications, which the salicylates too often cause."

It is evident from the above quotations, in which the salicylates are denounced specifically or by implication, and from the label which states that no salicylic acid is present, that the exploiters of the nostrum deliberately intended to give the impression that hymosa is free from salicylates or salicylic acid and contains only the vegetable or plant drugs enumerated. The very fact that the proprietors make such repeated efforts to give the impression that hymosa is free from salicylates is in itself sufficient to arouse suspicion and hence in the examination particular attention was given to the detection of salicylic acid or salicylates with the following results:



adjourned until th
20th, when Dr A. B. Gr
paper on "The Violet Ray in Ep

SALICYLIC ACID REPLACED

The Use of This Dangerous Agent in Rheumatism Obviated.

Recent clinical tests have proved Hymosa (Walker) to be of the greatest value in the treatment of rheumatism and the uric acid diathesis. No disturbance of the stomach or heart is caused by this preparation, and cures have been effected in many cases where ordinary treatment had been tried in vain. It seems that the use of the dangerous and ineffective salicylic acid will soon be given up, and Hymosa take its place.

AUTOINTOXICATION IN MENTAL DISTURBANCES

Boston Medical and Surgical Jour-
ed a remarkable paper
to the Men-
"A

Reproduction (reduced) of an advertisement of Hymosa. This indicates the attempt made to convey, by implication, the idea that the salicylates are absent from Hymosa.

> *Examination.*—Hymosa as purchased on the market is a dark brown liquid with an odor of sassafras and a rather sweetish taste, reacting acid to litmus. Qualitative tests having indicated the presence of salicylate, iodid, sodium, potassium, alcohol and some organic matter, presumably sugars and some plant extractives, these were determined

quantitatively.[1] It was found that a part of the salicylate was present as free salicylic acid and part *in a combined* form. The sodium determinations indicated that all the salicylate, excepting that in the form of free salicylic acid, was present as sodium salicylate. From the results of the potassium estimations, it was evident that the iodin was present in the form of potassium iodid.

From the results of the analysis it is believed that the preparation has approximately the following composition:

Salicylic Acid	0.32 gm.
Sodium Salicylate	1.15 gm.
Potassium Iodid	0.32 gm.
Sugars and extractives	4.60 gm.
Alcohol, U. S. P.	16.86 c.c.
Water to make	100.00 c.c.

These results indicate that hymosa is essentially a solution containing salicylic acid, sodium salicylate, potassium iodid, alcohol, sugars and plant extractives in the proportions given above, and show that the various statements referred to, regarding the absence of salicylic acid and salicylates are misleading and untrue. It further illustrates the repeatedly demonstrated fact that nostrums exploited as wonderful and new discoveries are new in name only—and whatever therapeutic value they possess depends on old and tried medicinal agents.

Editorial Note: In describing the methods employed by the manufacturers of Manola in exploiting their product, attention was called to the fact that the Manola Company was reported as being a subsidiary affair of the Luyties Homeopathic Pharmacy Company of St. Louis. It is reported that this same company also operates the Walker Pharmacal Company, which exploits hymosa and pas-avena.

REVISION OF THE PHARMACOPEIA

Report of the Committee of the Section on Dermatology

INDICATION OF EXTERNAL DOSAGE

We respectfully offer the following suggestions:

Articles in the Pharmacopeia which are used externally should, we believe, have indicated the strength in which they are used externally as well as their internal doses. For example:

Boric Acid.—Strength for external use as well as doses should be mentioned.

Carbon Dioxid.—This should be in Pharmacopeia and mention should be made of its use as a freezing agent.

Picric Acid.—This should be in Pharmacopeia and strength for use in burns given.

Salicylic Acid.—Strength for external use should be given, say from 2 per cent. in ointment base as antiseptic, up to 20 or 25 per cent. as caustic.

Sulphurous Acid.—Mention should be made of external use in skin diseases.

Tannic Acid.—Some indication of external use should be given.

Silver Nitrate.—Indication that it is a caustic should be given.

Arsenic Trioxid.—Its use as a caustic and its dosage should be indicated.

Balsam of Peru.—Its external use should be indicated.

Bismuth Subnitrate.—Its external use should be indicated.

Cantharis.—Its external use and dosage should be mentioned.

Guaiacol.—Its external use and dosage should be mentioned.

Mercuric Chlorid.—Use as antiseptic and caustic should be mentioned and strength of solutions given.

Oleum Cadini.—Strength for external use should be given.

Pix Liquida.—Strength for external use should be given.

Pyrogallol.—External use and dosage should be mentioned.

Resorcinol.—External use and dosage should be mentioned.

Sulphur.—External use and dosage should be mentioned.

Zinc Chlorid.—External use as caustic should be mentioned.

SUBSTANCES RECOMMENDED TO BE ADDED

Adeps anserini (goose grease) should be added.

Liquor guttæ perchæ should be added.

Chaulmoogra oil should be added and its internal and external dosage given.

Some additional salts of mercury, from the many now in use, especially in the treatment of syphilis, should be added. We suggest as eligible salts the following: benzoate, cyanid, salicylate, succinimid. These are among those most frequently used for hypodermic medication.

Liquor alumini acetatis is a much-used preparation in dermatology which might well be added to the Pharmacopeia.

Potassa sulphurata, much used in dermatology, should be added and its external dosage given.

There should be some powder in the Pharmacopeia of brownish pink tinge with which to make external applications of flesh color. Calamine is widely used for that purpose now and because of its wide use it is the most eligible powder for this purpose. The objection to calamine is that it is not standardized. We would suggest that if possible some standard color or composition for calamine should be adopted and that it be added to the Pharmacopeia. Zinc oxid, if properly colored, would be a better powder than calamine because it is lighter. A powder of the proper pinkish tint can be made by the addition of 0.3 per cent. of jeweler's rouge. The addition of this or some other artificially colored powder might possibly be made to the Pharmacopeia as a standard flesh-colored powder. It is necessary that the pigment in such a powder be insoluble in ordinary solvents.

Coal-tar (pix carbonis) should have official recognition.

A soluble, non-irritating salt of arsenic for hypodermic use should be given in the Pharmacopeia. Sodium cacodylate seems the most eligible.

The soft soap of the Pharmacopeia is not a good soap for therapeutic use because of its disagreeable odor of linseed oil. There should be an official soft soap made with olive oil or cotton-seed oil which would avoid this disagreeable odor.

The same objection to the odor of soft soap made with linseed oil holds against the present linimentum saponis mollis and if an olive oil or cotton-seed oil soft soap could be adopted in the Pharmacopeia it should be used in making the liniment of soft soap for therapeutic purposes.

The name "tincture of green soap" as a synonym of "linimentum saponis mollis" should be given in the Pharmacopeia because of its almost universal use.

Emplastrum acidi salicylici 10 per cent. is used in dermatology and might well be made official.

SUBSTANCES RECOMMENDED TO BE DROPPED OR REDUCED

The various forms of external applications used by dermatologists are well covered in the Pharmacopeia and National Formulary. Many local applications are included which dermatologists do not use but the dropping of which we do not deem it proper to recommend because of their possible use in other departments of medicine.

In general we find little use for the mixed ointments containing active ingredients, as there is the same objection to their use that obtains against all ready-made prescriptions. As a rule the proportions of active ingredients in the official ointments are stronger than these medicaments are commonly used in dermatology.

Unguentum hydrargyri dilutum should be dropped. It is confused with 50 per cent. mercury ointment; and the preparation of dilute mercury ointments from the 50 per cent. ointment is so easy that the dilute official ointment is of no use.

Unguentum hydrargyri nitratis, 10 per cent., is too strong; a better preparation would be 5 per cent.

Unguentum hydrargyri oxidi flavi, 10 per cent., is too strong; a better ointment would be 5 per cent.

Unguentum hydrargyri oxidi rubri, 10 per cent., is too strong; a better one would be 5 per cent.

Unguentum picis liquidæ, 50 per cent., is very much too strong. It should be reduced to at least 20 per cent.

Unguentum potassi iodidi should be dropped.

Unguentum sulphuris, 15 per cent., is too strong. It should not be more than 10 per cent.

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[1] The details of the analysis will be sent on receipt of a stamped, addressed envelope; they will also be published in the annual report of the Chemical Laboratory.

Unguentum zinci stearatis, 50 per cent., is, so far as we know, not used by dermatologists and we know no reason of its inclusion in the Pharmacopeia.

Of the cerates, ceratum is a good base, though we know no reason why it should not as well be made with white petrolatum 70 per cent. or benzoinated lard 70 per cent., instead of white petrolatum 20 per cent., and benzoinated lard 50 per cent.

The other cerates in the Pharmacopeia have practically no use in dermatology.

Unguentum is a satisfactory base.

Of the medicated plasters, emplastrum plumbi and emplastrum hydrargyri are the only ones which have any use in dermatology.

W. A. Pusey, Chicago,
M. B. Hartzell, Philadelphia,
George T. Jackson, New York,
Committee.

Correspondence

Age and Exercise

To the Editor:—You were kind enough to publish (Aug. 28, 1909, p. 730) a letter from me on the subject above cited, in which I took strong ground in favor of the proposition that "most men lie down and die, not knowing what they are capable of, either mentally or physically." This letter had been called out, you may remember, by an editorial of yours under the title "The Septuagenarian Pedestrian" which, of course, referred to Mr. Weston and his walk from New York to San Francisco. I thought when I wrote you, nine months ago, that perhaps sometime I should try to demonstrate in my own body the truth of my assertions. Accordingly, a week ago last Thursday (May 12, 1910), I set out to walk from Newark, N. J., to Philadelphia, intending to accomplish the feat in twenty-four hours if possible. I lost my way during the night, and by so doing, added several miles to the walk, so that I calculated that in twenty-two hours I had walked over ninety miles, when I reached the city line of Philadelphia. In two months from to-morrow I shall be 59 years old. The principal reason for undertaking the walk was that I wished to demonstrate experimentally that people over middle age can improve their physical condition as well as their mental powers, as they grow older, if they really wish to do so. Mr. Weston's career goes a long way in support of the above assertion. He walked from Portland, Maine, to Chicago in 1907 in sixteen and one-half hours' less time than it had taken to accomplish the same feat forty years before.

The walk that he has just completed from Los Angeles to New York is not only the greatest feat of its kind on record; but far better than Mr. Weston ever did or was capable of doing in the earlier years of his life. So far from this man finding himself broken down and ready to die at 70 years of age, he seems to be capable of doing more than he ever could have done before.

Now why is this? Is it a miracle or a reversion of Nature? Or is there some fake about it? The answer is very plain and simple. It is merely a case in which a man has gradually developed great powers of physical endurance and has conserved them by abstinence from liquor and tobacco and by great moderation in diet. So firmly convinced was I that nearly any one could effect a similar improvement in his powers by following a similar regimen that I determined to try some experiments on myself. I had stopped the use of tobacco and all forms of alcoholic drink some years ago, and since I have been eating whole wheat bread and bran bread my general health and my powers of endurance have notably improved. For twenty years before beginning to eat whole wheat products I was so constipated that my bowels never moved without medicine. When I began to have natural movements again I began to feel like a different man, so much brighter and more cheerful and more ready for work or for play. I could not help observing that my capacity for all sorts of prolonged exertion had greatly augmented.

Finally, to put the matter to the test, I determined on an endurance walk for twenty-four hours and chose the journey from Newark to Philadelphia as a good test. That I was able to accomplish this feat at my age with only some stiffness of the muscles and some blisters, I attribute entirely to my diet and my abstemious habits, added to the fact that I am and always have been a staunch advocate of walking as a wholesome and delightful pastime.

Yet I have never before attempted an endurance test of any description. Now I feel so elated over the success of my first attempt that I may start out again some time to see what I can do, and when I am as old as Mr. Weston I may perhaps have improved as much over my present walking capacity as he has improved in the last twelve years. It is quite needless for people to give up doing anything that is to be done because they are approaching 70. That is really the age when they should be in their prime mentally and physically.

Most people who have accomplished anything worth while have worked long after they were 70. Yet the sad part of the matter is that they—at least many of them—have been obliged to do their work in spite of bodily weakness and the so-called infirmities of age, whereas had they known how to take care of their bodies and followed out my simple rules of life, they would have enjoyed their work at 70 as much as they did at 50.

As Parkes said years ago, "our fate is in our own hands," and it is because I am trying to teach people that truth that I am so much pleased that I have been able to demonstrate it, in great part at least, in my own case; for people will, I hope, now begin to believe that I know whereof I speak.

Richard Cole Newton, Montclair N. J.

Hypertension and Treatment

To the Editor:—From my standpoint, the medical profession is much indebted practically to Dr. Miller's article in the last issue of The Journal.[*] The prevailing fashion nowadays is, so soon as hypertension is revealed, either by palpation of the radial or by means of the finger and the sphygmomanometer, to recur to medication of an active sort to neutralize the condition, and this is done not only when there are unpleasant or it may be threatening symptoms, but also when those that exist are of very mild type, or, indeed, none is present. The condition is there and that is all. It has been clear to me and others for a long while, that hypertension may be a wholly conservative process, and on that account should not be interfered with, except for good and sufficient reasons, and then only in a judicious and temporary way. Again, it is also evident that the cause of symptoms is not always simple, but rather a combination of factors which require close attention to interpret correctly. To medicate actively before one understands fully what one is doing is not useful. For my part I am satisfied that harm has been done by too great reliance on the mere reading of the sphygmomanometer. Many things should be considered before the height of the column of mercury becomes a reliable guide as to treatment. It is not essential, however, for the attending physician to be an expert in the application of the instrument in order to give it proper interpretation, but it is necessary that the instrument should be properly used. This is manifest in the same way that is true of the ophthalmoscope or laryngoscope. It is also true now of many laboratory researches in hospital or consulting room, which are made with special instruments.

Beverley Robinson, New York.

Rare Fetal Monstrosity

To the Editor:—In The Journal, May 28, 1910, page 1786, is a report of a case of "Rare Fetal Monstrosity" by Dr. Aranow, in which he says he has found but one case reported in medical literature of "entire absence of abdominal parietes" in a new-born child. I call attention to a case reported by me in *American Medicine*, vol. ii, page 208, the case being almost identical with the one mentioned by Dr. Aranow, the chief difference being that in my case there was entire absence of sexual organs and anal aperture.

H. H. Loveland, M.D., Republic, Mich.

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[*] May 21, 1910.

Table of Contents Misleading in Its Reference to Chinosol

To the Editor:—In The Journal, May 28, containing the report on Chinosol by the Council on Pharmacy and Chemistry, the table of contents (second cover page) is so worded as to have caused an entirely incorrect interpretation. The report of the Council states that Chinosol is *non-poisonous and that* it is an intensely powerful antiseptic, much stronger than phenol (carbolic acid) and even stronger than bichlorid. It is as an antiseptic that we are introducing Chinosol; thus as a matter of justice to Chinosol and to us, we ask that you publish this letter.

The Chinosol Co., New York City,
by Charles Roome Parmele, President.

Warning Against an Impostor

To the Editor:—A man pretending to be my brother is traveling through the south and west borrowing money from physicians. If you can warn the profession against such an impostor you would, I am sure, be doing a public service.

L. Emmett Holt, New York.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware: Regular, Dover, June 21; Homeopathic, Wilmington, June 21. Secretary of the Medical Council, Dr. Henry W. Briggs, Wilmington.

Kansas: Scottish Rite Temple, Kansas City, June 14. Sec., Dr. F. P. Hatfield, Olathe.

Maryland: 1211 Cathedral St., Baltimore, June 15. Sec., Dr. J. Mc.P. Scott, Hagerstown.

Minnesota: State University Laboratories, Minneapolis, June 14-17. Sec., Dr. W. S. Fullerton, American National Bank Bldg., St. Paul.

Missouri: St. Louis and Kansas City, June 13-15. Sec., Dr. Frank B. Hiller, Jefferson City.

New Jersey: State House, Trenton, June 21. Sec., Dr. H. G. Norton.

New York: Albany, June 28-July 1. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

North Carolina: Wrightsville, June 15. Sec., Dr. Benjamin K. Hays, Oxford.

Pennsylvania: Regular, Philadelphia and Pittsburg, June 21; Homeopathic, Philadelphia, June 21; Eclectic, Harrisburg, June 21. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

Ohio: Columbus, June 13-15. Sec., Dr. George H. Matson, State House.

South Carolina: State House, Columbia, June 14. Sec., Dr. Harry H. Wyman, Aiken.

Texas: House of Representatives, Austin, June 28-30. Sec., Dr. M. E. Daniel, Honey Grove.

Virginia: Richmond, June 21-24. Sec., Dr. R. S. Martin, Stuart.

Wyoming: Laramie, June 22-24. Sec., Dr. S. B. Miller.

Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners reports the written examination held at Milwaukee, Jan. 12-15, 1910. The number of subjects examined in was 21; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 16, of whom 14 passed, including 1 *osteopath*, 1 failed and 1 was conditioned. Twenty-six candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago	(1909)	80
Northwestern University Medical School	(1909)	79
Hamline University	(1909)	87
Jefferson Medical College	(1909)	84
Marquette University	(1908) 75, 77; (1909)	75, 75, 77, 78
Wisconsin College of Physician and Surgeons	(1909)	82
McGill University, Canada	(1909)	89
University of Heidelberg, Germany	(1905)	85

FAILED

Marquette University	(1909)*	

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
George Washington University	(1905)	Maryland
Northwestern Univ. M. School (2, 1904) (1907)	(1908)	Illinois
College of Physicians and Surgeons, Chicago	(1902)	Minnesota
(1904) Maryland; (3, 1908) (1909) Illinois.		
Bennett Coll. of Ec. Med. and Surgery	(1904)	Missouri
Rush Medical College, (1875) Minnesota; (1901) Illinois; (1904) Missouri; (1906) Illinois.		
Hering Medical College	(1902)	Colorado
Iowa Medical College, Eclectic	(1883)	Illinois
University of Iowa, College of Medicine	(1890)	Iowa
College of Physicians and Surgeons, Baltimore	(1908)	Virginia
Johns Hopkins University	(1908)	Maryland
St. Louis University	(2, 1908)	Illinois
Woman's Medical College of Pennsylvania	(1908)	Maryland
Wisconsin College of Phys. and Surgeons	(1897)	Iowa
University of Toronto, Canada	(1909)	Iowa

* Percentage not given.

Connecticut March Report

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 8-9, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, *of whom 14 passed and 4 failed and 1 withdrew*. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Yale Medical School	(1908) 81.9; (1909)	79.7, 84.8, 89.3
Georgetown University	(1907) 81.9; (1908)	78, 81.3
Johns Hopkins University	(1906)	84.5
Harvard Medical School	(1903)	75.8
Dartmouth Medical School	(1909)	85.3
Cornell University Medical College	(1905)	87.3
Long Island College Hospital	(1907)	83.7
Jefferson Medical College	(1909)	75.8
University College of Medicine, Richmond	(1903)	78

FAILED

Howard University	(1909)	69
Baltimore Medical College	(1909)	68.5, 68.9, 71

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PROPHYLACTIC USE OF ANTITETANIC SERUM

To the Editor:—Please publish a list of articles on the use of antitetanic serum as a prophylactic measure, with names of authors.

H. J. Scherck, St. Louis.

Answer.—The following articles deal with this subject:

Scherck: *Therapeutic Gazette*, November, 1904.

Anders, J. M., and Morgan, A. C.: Tetanus, The Journal A. M. A., July 29, 1905, p. 314.

King, W. E., and McClintock, C. T.: Oral Administration of Antitoxins for Prevention of Diphtheria, Tetanus and Possibly Sepsis, *Jour. Infect. Dis.*, Oct. 30, 1906; abstr. in The Journal A. M. A., Nov. 24, 1906, p. 1766.

Terrier, F., and Mercadé, S.: Failure of Preventive Injection of Antitetanus Serum in Two Cases, *Rev. de chir.*, xxvii, No. 1.

Busch, M.: Preventive Treatment of Tetanus by Antitoxin, *Arch. f. klin. Chir.*, lxxxii, No. 1.

Suter, F. A.: Local Subcutaneous and Subdural Application of Antitetanus Serum and Prophylaxis of Tetanus, *Beitr. z. klin. Chir.*, lii, No. 3; abstr. in The Journal A. M. A., Nov. 23, 1907, p. 1811.

Labbé, L.: Preventive Antitoxin Treatment of Tetanus, *Bull. de l'Acad. de méd.*, June 30, 1908.

Underwood, J. H., and Reading, G. E.: Prevention and Treatment of Tetanus, The Journal A. M. A., Aug. 22, 1908.

Rowan, C. J.: The Prophylactic Use of Tetanus Antitoxin, The Journal A. M. A., Feb. 12, 1910, p. 533.

Dorsey, F. B.: Antitetanic Serum in Tetanus, The Journal A. M. A., March, 26, 1910, p. 1075.

Bar, E.: Preventive Serotherapy of Tetanus, *Corr.-Bl. f. Schweizer Aerzte*, April 10, 1910; abstr. in The Journal A. M. A., May 28, 1910, p. 1830.

Wiedemann, A.: Serotherapy of Tetanus, *München. med. Wchnschr.*, April 12, 1910; abstr. in The Journal A. M. A., May 21, 1910, p. 1731.

HAIRY TONGUE

To the Editor:—In THE JOURNAL, July 24, 1909, p. 324, is a short abstract (No. 81, Arrowsmith, H.: *Laryngoscope*, July, 1909) on black hairy tongue, or glossitis nigra, which, however, does not speak of the treatment. Please give me any information or references available on the pathology and treatment of the condition.

HARRY S. BULL, Auburn, N. Y.

ANSWER.—Hairy tongue is a rare affection, consisting of an overgrowth of the epithelium covering the filiform papillæ, forming a growth that closely resembles tendrils, lashes, seaweed or hairs, and has been in some cases compared to feathers. The hypertrophied epidermis is colored dark brown or black, the coloring being variously attributed to colors produced by mold or other micro-organisms or to staining of the epithelium, sometimes intentionally in the case of hysterical patients. No symptoms are usually produced beyond a mawkish taste and occasionally pains. In Curtis' case the pain was quite pronounced. The condition may persist for a variable time, but as a rule eventually disappears spontaneously. Treatment seems to be of little avail. The patch may be painted with 2 per cent. salicylic acid or with diluted lactic acid; or a solution of phenol, 1 in 60, may be rubbed in with a clean piece of cloth, three or four times a day. Reference may be made to Butlin ("Diseases of the Tongue," p. 145), Stelwagon ("Diseases of the Skin," Edition 5, p. 1119) and Pusey ("Principles and Practice of Dermatology," Edition 1, p. 996). The latter authors give full bibliographies. Blegvad (*Ann. Otol., Rhinol. and Laryngol.*, September, 1908, p. 753) has an exhaustive article on the subject with bibliography.

METHOD OF ESTIMATING THE AMMONIA COEFFICIENT OF URINE

To the Editor:—Dr. Adam H. Wright, of the University of Toronto, speaking about pernicious vomiting of pregnancy, (THE JOURNAL, May 7, 1910, p. 1503), refers to Dr. Whitridge Williams of Baltimore, as having demonstrated, by chemical examination of the urine, a "decrease in the amount of nitrogen excreted as urea, and an increase in the amount excreted as ammonia." Can you refer me to a description of these chemical tests? G. N. P.

ANSWER:—Briefly speaking, the method which has generally been used in Toronto for the estimation of the ammonia coefficient may be described as follows: (1) estimation of the total nitrogen by Kjeldahl's method; (2) estimation of ammonia by Folin's method; and (3) division of ammonia nitrogen by total nitrogen to get the ammonia coefficient. It is difficult to carry out the Kjeldahl method in an ordinary office, but Prof. J. B. Leathes, of the Department of Pathological Chemistry, University of Toronto, has simplified the process to such an extent that any physician may use it. Professor Leathes estimates the ammonia nitrogen by a method introduced by Ronchèse and Malfatin about two years ago, which takes less time than Folin's method. Dr. F. W. Rolph furnishes the following description of the methods now used in the laboratory of the University of Toronto:

The combustion of the nitrogenous substances in urine and the conversion of this nitrogen into ammonium sulphate by the action of strong sulphuric acid can be accurately effected if a smaller quantity than that usually prescribed is taken, in a test-tube, in any room without any inconvenience if the following arrangements are made:

With a pipette exactly 1 c.c. of the urine is introduced into a test-tube made of Jena glass, or some other equally resistant glass. Two or three times this volume of strong, pure sulphuric acid is added, and a few milligrams of copper sulphate or copper wire. The tube is then set in a holder obliquely over a small Bunsen flame, and an inverted flask is held over the mouth of the tube by another holder fixed to the same stand. This flask contains 1 or 2 c.c. of strong caustic alkali solution and the inside of the flask has been moistened all around with this alkali. The flask can be kept cool by placing on it a piece of wet filter-paper, and by keeping the paper moist by means of a siphon thread leading from a vessel of water. The strongly acid and offensive fumes that are given off from the mouth of the test-tube may in this way be completely condensed in the flask, and absorbed by the alkali without any escape into the air of the room. The combustion is usually finished in about twenty minutes, and the amount of ammonia found can be determined either by distillation or a current of air as usually done.

The formalin method of estimation of ammonia nitrogen introduced by Ronchèse, Malfatin and others is as follows:

Take 20 c.c. of urine. Dilute with water and add some crystals of neutral potassium oxalate and a few drops of alcoholic solution of phenolphthalein. Titrate with decinormal caustic soda until a definite red tinge appears. Now add to the urine 2 c.c. of previously neutralized commercial formalin. In a few seconds the pink coloration of the mixture disappears. This is due to the fact that the ammonia present in the urine combined with acids has united as a condensation reaction with formaldehyd as hexamethylenamin. Thus the acid which was previously combined with this ammonia base has been set free, causing the disappearance of the pink color. Further titration is now carried out with the same decinormal caustic soda solution, until the pink color reappears.

Each cubic centimeter of decinormal soda used in this second titration represents 0.0014 gm. of nitrogen in the form of ammonia.

EXAMPLE.—Amount of urine in 24 hours = 1500 c.c.

No. of c.c. of n/10 soda used in 2d. titration = 8.

20 c.c. of urine were used for testing.

$\therefore 8/20 \times 1500/1 \times .0014/1 = 0.84$ gm. of ammonia nitrogen in 24 hours.

Or if we want to find the amount of ammonia nitrogen in 100 c.c.

$8/20 \times 100/1 \times 0.0014/1 = .056$.

Now if the total nitrogen were 15 gm.

The nitrogen in 1500 c.c. urine would be 15 gm.

The nitrogen in 1 c.c. urine would be 15/1500

The nitrogen in 100 c.c. urine would be $15 \times 100/1500 = 1$ gm.

$\therefore$ the ammonia nitrogen would be to the total nitrogen as 5.6 to 100

$\therefore$ ammonia coefficient = 5.6.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 4, 1910:

[illegible] ot., detailed for duty in the Bureau of [illegible] ands.

[illegible] Deane C., majors, detailed to represent the Medical Department of the Army at the meeting of the American Medical Association at St. Louis, Mo., June 7-10, 1910.

Van Poole, Gideon McD., capt., detailed as chief surgeon during the military tournament at Chicago, during the month of July, 1910.

Owen, Leartus J., capt., detailed as sanitary officer during the military tournament at Chicago, during the month of July 1910.

Casaday, George H., dental surgeon, relieved from temporary duty at Fort Rosecrans, Cal., and to return to Presidio of Monterey, Cal., for duty; when his services are no longer needed at the latter post, will stand relieved and will proceed to Army General Hospital, San Francisco, Cal., for duty.

Napier, Edward L., 1st lieut., M. R. C., granted 10 days' leave of absence.

Casaday, George H., dental surgeon, left from duty at Fort Rosecrans, Cal., en route to Army General Hospital, San Francisco, Cal., for duty.

The following named officers of the Medical Reserve Corps, having completed course at Army Medical School, have been ordered to stations designated: Casper, Joseph, 1st lieut., Du Pont, Del., Dept. of the East; Sheep, William L., 1st lieut., Ethan Allan, Vt., Dept. of the East; Davis, William C., 1st lieut., Ethan Allen, Vt., Dept. of the East; Knox, Howard A., 1st lieut., Fort Hancock, N. J., Dept. of the East; Beeuwkes, Henry, 1st lieut., Fort Jay, N. Y., Dept. of the East; Crum, Wayne H., 1st lieut., Madison Barracks, N. Y., Dept. of the East; Carr, William B., 1st lieut., Fort Monroe, Va., Dept. of the East; Holmes, Robert W., 1st lieut., Plattsburg Barracks, N. Y., Dept. of the East; Darby, Taylor E., 1st lieut., Fort McPherson, Ga., Dept. of the Gulf; Davis, Arthur O., 1st lieut., Fort Oglethorpe, Ga., Dept. of Gulf; Beery, Harry R., 1st lieut., Fort Benjamin Harrison, Ind., Dept. of the Lakes; Mount, James R., 1st lieut., Fort Sheridan, Ill., Dept. of the Lakes; Demmer, Charles C., 1st lieut., Fort Thomas, Ky., Dept. of the Lakes; Bowen, Albert S., 1st lieut., Fort Snelling, Minn., Dept. of Dakota; Etter, Harry B., 1st lieut., Fort Snelling, Minn., Dept. of Dakota; Fisk, Owen C., 1st lieut., Fort Crooke, Neb., Dept. of Missouri; Fletcher, John P., 1st lieut., Fort D. A Russell, Wyo., Dept. of Missouri; Ferenbaugh, Thomas L., 1st lieut., Fort Des Moines, Iowa; Dept. of Missouri; Burket, John A., 1st lieut., Fort Riley, Kan., Dept. of Missouri; Kramer, Floyd, 1st lieut., Fo [illegible] of Missouri; Fox, James S., 1st lieut., Fort [illegible] t. of Texas; Aydelotte, John T., 1st lieut., [illegible] Dept. of Texas, relieving First Lieutena [illegible] Cook, George W., 1st lieut., Fort Douglas [illegible]; Johnson, Thomas H., 1st lieut., Fort Baker, Cal., Dept. of California; King, Charles T., 1st lieut., Presidio of Monterey, Cal., Dept. of California; Holmberg, Carl E., 1st lieut., Presidio of San Francisco, Cal., Dept. of California; Kremers, Edward D., 1st lieut., Presidio of San Francisco, Cal., Dept. of California; Hill, Felix R., 1st lieut., Fort George Wright, Wash., Dept. of the Columbia [illegible] D., 1st lieut., Vancouver Barracks, Wash., De [illegible] McCornack, Condon C., 1st lieut., Vancouver [illegible] of the Columbia; DeVoe, Ralph G., 1st lieut. [illegible], Dept. of the Columbia; Jones, Edgar C., 1st lieut., Fort Liscum, Alaska. Dept. of the Columbia, relieving Captain John A. Clark, Medical Corps; Allen William H., 1st lieut., Fort Slocum, N. Y.; Jones, Glenn I., 1st lieut., Fort McDowell, Cal.; Weed, Mark D., 1st lieut., Walter Reed General Hospital, Takoma Park, D. C.; McAlee, Larry B., 1st lieut., Army and Navy General Hospital, Hot Springs, Ark.; Welles, Edward M., Jr., 1st lieut., Army General Hospital, San Francisco, Cal.; Napier Edward L., 1st lieut., Army General Hospital, San Francisco, Cal.; Reynolds, Royal, 1st lieut., Co. B, Hospital Corps, Presidio, San Francisco; Austin, Thomas C., 1st lieut., Co. B, Hospital Corps, Presidio, San Francisco; Bastion, Joseph E., 1st lieut., Co. C, Hospital Corps, Walter Reed General Hospital, District of Columbia; Schlanser, Adam E., 1st lieut., Co. C, Hospital Corps, Walter Reed General Hospital, District of Columbia; Cooper, Wibb E., 1st lieut., Fort D. A. Russell, Wyo., Dept. of the Missouri; Haverkampf, Charles W., 1st lieut., Co. A, Hospital Corps, Fort D. A. Russell, Wyo., Dept. of the Missouri; Edwards, George M., 1st lieut., West Point, N. Y.

Coffey, Albion McD., 1st lieut., M. R. C., when relieved from Fort Sam Houston, Tex., will proceed to Fort St. Philip, La., relieving First Lieutenant Samuel A. Springwater, M. R. C., who will proceed to his home and report arrival to The Adjutant General.

Clark, John A., Major, M. C., when relieved from duty at Fort Liscum, Alaska, to proceed to Seattle, Wash., and report arrival to The Adjutant General.

Koerper, Conrad E., M. C., major, relieved from Fort Slocum, N. Y., on arrival of First Lieutenant William H. Allen, M. R. C., and ordered to Fort Bayard, N. Mex., relieving Major Charles N. Barney, M. C., ordered to Fort Wadsworth, N. Y.

Dawe, Courtlandt W., M. R. C., ordered from Plattsburg Barracks, N. Y., to home; report arrival to The Adjutant General.

Persons, Elbert E., M. C., major, and Nichols, Henry J., capt., M. C., appointed members of retiring board at Governor's Island, N. Y.

Banister, John M., col., M. C., ordered to U. S. Military Prison. Fort Leavenworth, Kan., on official business and on completion to return to his proper station.

Austin, Thomas C., 1st lieut., M. R. C., granted 10 days' leave, effective on or about June 1, 1910.

Fuller, Leigh A., M. C., granted 10 days' leave of absence, effective June 3, 1910.

Graham, George D., dental surgeon, returned to Fort Leavenworth, Kan., from duty at Fort Des Moines, Iowa.

Medical Corps, U. S. Navy

Changes for the week ended June 4, 1910:

Stibbens, F. H., P. A. surgeon, commissioned passed assistant surgeon from Jan. 4, 1910.

Allen, A. H., P. A. surgeon, detached from the Naval Hospital, New York, and ordered to duty at the Navy Yard, Boston, Mass., in connection with Navy rifle team.

Pugh, W. E., Jr., P. A. surgeon, ordered to duty at the Naval Hospital, New York.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended June 1, 1910:

Cofer, L. E.: asst.-surgeon-general, granted 3 days' leave of absence from May 26, 1910; directed to proceed to Reedy Island Quarantine Station on special temporary duty.

Banks, Charles E., surgeon, granted 12 days' leave of absence from June 12, 1910.

White, J. H., surgeon, detailed to attend the annual session of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Woodward, R. M., surgeon, leave of absence for 7 days from May 15, 1910, amended to read 1 day, May 14, 1910.

Lumsden, L. L., P. A. surgeon, detailed to attend the annual meeting of the Carolina Municipal Convention, to be held at Winston-Salem, N. C., June 2-3, 1910.

McClintic, T. B., P. A. surgeon, directed to proceed to Toledo, Ohio, Lansing, Mich., and Chicago, on special temporary duty.

Goldberger, Joseph, P. A. surgeon, granted 2 days' leave of absence from May 24, 1910, under paragraph 191, Service Regulations; directed to proceed to New York City on special temporary duty.

Vogel, C. W., P. A. surgeon, granted 10 days' leave of absence from June 1, 1910.

Long, J. D., P. A. surgeon, detailed to represent the Service at the annual session of the American Medical Association, to be held in St. Louis, June 7-10, 1910.

Frost, W. H., P. A. surgeon, directed to proceed to Williamson, W. Va., on special temporary duty.

Bean, L. C., acting asst.-surgeon, granted 3 days' leave of absence from June 2, 1910.

Frissell, C. M., acting asst.-surgeon, granted 3 months' leave of absence, without pay, from June 1, 1910.

Riemer, H. B. C., acting asst.-surgeon, granted 2 days' leave of absence from May 23, 1910, and 7 days from May 27, 1910, under paragraph 210, Service Regulations.

Watson, H. J., acting asst.-surgeon, leave of absence for 19 days from May 30, 1910, amended to read 19 days from May 7, 1910.

Board of medical officers convened to meet at Detroit, for the purpose of reexamining an alien. Detail for the board: Passed Assistant Surgeon M. J. White, chairman; Acting Assistant Surgeon Charles Bell, recorder.

Marriages

Leo Christian Huelsmann, M.D., to Miss Harriet Sturdy, both of St. Louis, May 25.

John Patrick Brandon, M.D., to Miss Anna Bradford Hux, both of Essex, Mo., June 1.

J. Fred McBride, M.D., Coleta, Ill., to Miss Elizabeth Buchborn, of Philadelphia, May 25.

Wilber Elmer Post, M.D., Chicago, to Miss Louise C. Morrison, of Springfield, Ill., June 1.

William S. Weakley, M.D., York, Pa., to Miss Zella Olivia Keepers, of Greencastle, Pa., May 21.

Harry Richard Brown, M.D., Daykin, Neb., to Miss Alta Briggs, of Broken Bow, Neb., June 1.

Elsey W. Howell, M.D., to Miss Bessie Willey, both of Oakton, Ky., at Union City, Tenn., May 25.

Edward Stanley Abbott, M.D., Waverly, Mass., to Miss Marian Wetherill, of Philadelphia, May 26.

William Ernest Blodgett, M.D., Detroit, to Miss Mary Charlotte Bishop, of New York City, June 2.

William Thomas Trewyn, M.D., Peoria, Ill., to Miss Gertrude Cross, of Marshalltown, Iowa, at Chicago, June 2.

Joseph John Sinnott, M.D., Mount Vernon, N. Y., to Miss Cecilia Margaret Cook, of Poughkeepsie, N. Y., at Mount Vernon, June 8.

Deaths

Elizabeth Blackwell, M.D. the first woman to be graduated from a modern medical school; an alumna of the Geneva (N. Y.) Medical College, in 1847; later a student in Paris and London; who in 1867, in connection with her sister, organized the Woman's Medical College of the New York Infirmary; who registered in England as a physician in 1869, and has since practiced in London and Hastings; one of the founders of the London Medical School for Women, and of the National Health Society of London; died at her home in Hastings, England, June 1, aged 89.

Edwin Forrest Preston, M.D. New York University, New York City, 1871; a member of the Medical Society of the State of New York; for more than 25 years health officer of Babylontown, for 20 years a member and chairman of the board of education of Amityville; for three terms coroner of Soffolk county; formerly president of the Bank of Amityville; died at his home in that place, May 26, after the amputation of a toe for gangrene, aged 69.

Montrose Reuben Richard, M.D. College of Physicians and Surgeons, New York, 1877; of New York City; formerly a member of the American Medical Association; a fellow of the New York Academy of Medicine; formerly president of the Nott Medical Society, Mobile, Ala., and of the Harlem Medical Association; resident physician in the Touro Infirmary, New Orleans, from 1880 to 1883; died at the home of his brother in Mobile, Ala., May 25, aged 53.

John T. Wilson, M.D. Jefferson Medical College, 1867; of Sherman, Texas; a member of the American Medical Association and Southern Surgical and Gynecological Association; formerly president of the Texas State Board of Medical Examiners, superintendent of the Texas State Hospital, Austin, and of the North Texas Hospital for the Insane, Terrell; a Confederate veteran; died in Washington, D. C., May 22, aged 64.

Charles Edwin Goodwin, M.D. University of Michigan, 1883; College of Physicians and Surgeons, Chicago, 1904; of Shepherd, Mich.; a member of the Michigan State Medical Society, health officer of Coe township, Isabella county, and vice-president of the Isabella County Medical Society; died at the home of his brother in Ithaca, Mich., May 24, from pernicious anemia, aged 49.

George Wiley Holmes, M.D. Bellevue Hospital Medical College, 1871; University of Michigan, Ann Arbor, 1873; a veteran of the Civil War; for several years a practitioner of Cedar Rapids, Iowa; for more than 15 years a medical missionary in Tabriz, Persia, and physician to the Shah; died at his home in Boonton, N. J., May 10, from organic heart disease, aged 69.

William August Mogk, M.D. University of Michigan, Ann Arbor, 1898; physician of the hospital department of the construction force of the Los Angeles Water Supply Co., and in charge of a hospital northeast of Mojave; was found dead in the Sand Canon Desert of Southern California, May 20, from exhaustion and thirst, aged 35.

John M. Pischczak, M.D. University of Lemberg, Galicia, Austria, 1862; a member of the American Medical Association; at one time professor of pharmacy in the University of Austria; for two terms president of the Polish Medical Society; died at his home in Chicago, June 1, from angina pectoris, aged 72.

William Frederick Mead, M.D. College of Physicians and Surgeons, Boston, 1883; Dartmouth Medical School, Hanover, N. H., 1886; one of the founders of the Dartmouth Medical Alumni Association; also a practitioner of dentistry of Boston; died at his summer home in Hingham, Mass., May 21, aged 63.

William H. Hornaday, M.D. Central College of Physicians and Surgeons, Indianapolis, 1876; of Frankfort, Ind.; a veteran of the Civil War, and for many years a practitioner of Clinton county and justice of the peace of Forest; died in the Palmer Hospital, Frankfort, May 30, from senile debility, aged 73.

David M. Ogden, M.D. George Washington University, Washington, D. C., 1888; a member of the Medical Association of the District of Columbia, and the District of Columbia Medical Society; died at his home in Washington, April 10, from valvular disease of the heart, aged 58.

Theodore Secor, M.D. 1877; one of the oldest residents of Minneapolis, and an original "free-soiler;" a member of the Wisconsin Constitutional Convention in 1847; died at the home of his granddaughter, in Minneapolis, April 24, from chronic nephritis, aged 96.

Johnson Pillmore, M.D. Cincinnati College of Medicine and Surgery, 1872; a member of the Medical Society of the State of New York; physician to the Rome Hospital; died at his home in Delta, May 20, from disease of the bladder of long standing, aged 62.

Samuel B. Coe, M.D. Western Reserve University, Cleveland, 1886; who attended lectures at Rush Medical College in 1855 and 1856; for many years a practitioner of Fitzgerald, Ga., but later of Minneapolis, died at his home in Rochester, Minn., May 29, aged 75.

La Fayette Hussey, M.D. University of Pennsylvania, Philadelphia, 1863; a member of the Medical Society of the State of North Carolina; one of the oldest practitioners of Duplin county; died at his home in Warsaw, May 22, from senile debility, aged 78.

George Whitfield Furey, M.D. University of Michigan, Ann Arbor, 1877; a specialist in diseases of the eye and ear; for five years a member of the pension board of Sunbury, Pa.; died at his home in that city, May 20, from nephritis, aged 57.

Alexander C. Smith, M.D. Long Island College Hospital, Brooklyn, 1874; a member of the American Medical Association; president of the pension board of Sterling, Ill.; died at his home in that city, May 27, from heart disease, aged 69.

William Stewart Downey, M.D. Victoria College, Toronto, 1865; Bellevue Hospital Medical College, 1865; a member of the American Medical Association; died at his home in Chicago, June 1, from heart disease, aged 70.

Henry Thomas Simmons, M.D. University of Pennsylvania, Philadelphia, 1908; of Altoona; died in the Charity Hospital, Cleveland, Dec. 6, 1909, from the effects of a fall and fracture of the base of the skull, aged 26.

Thomas M. Price, M.D. University of Louisville, 1875; one of the oldest practitioners of Hinds county, Miss.; was found dead in his buggy near his home in Raymond, Miss., May 28, from angina pectoris, aged 56.

John Lucas Corlew, M.D. Keokuk (Ia.) Medical College, 1883; formerly a member of the Missouri State Medical Association; died at his home in Columbia, April 8, from pulmonary tuberculosis, aged 55.

Calvin Anderson, M.D. College of Physicians and Surgeons, New York City, 1865; a member of the Medical Society of New Jersey, and mayor of Madison; died in that city, May 26, from heart disease, aged 69.

Arthur Steele Andrews, M.D. Eclectic Medical Institute, Cincinnati, 1875; formerly president of the Washington (Kan.) National Bank; died at his home in Topeka, Kan., May 19, from nephritis, aged 59.

Isaac P. Farquhar, M.D. Miami Medical College, Cincinnati, 1869; of Zanesville, O.; a veteran of the Civil War; died at the home of his son in Cleveland, May 28, from cerebral hemorrhage, aged 67.

William B. Chambers, M.D. Homeopathic Medical College of St. Louis, 1881; for many years a practitioner of Crawfordsville, Ind.; died at his home in Shelburn, from nephritis, May 26, aged 53.

Henry E. Misener, M.D. Physio-Medical College of Indiana, Indianapolis, 1882; for many years a resident of Servia, Ind.; died at the home of his son at Mechanicsburg, Ind., May 23, aged 51.

Hiram C. Driggs, M.D. Hahnemann Medical College, Philadelphia, 1854; a retired physician of New York City; was run over by a fire engine tender, May 24, and instantly killed, aged 82.

James W. Foster, M.D. Cincinnati College of Medicine and Surgery, 1870; for 35 years a practitioner of Kansas City; died at his southern home in Blessing, Texas, May 18, aged 63.

John Dolway Wilson, M.D. Trinity Medical College, Toronto, 1883; formerly mayor of London, Ont.; died in that city, May 16, from septicemia, due to an operation wound, aged 52.

W. H. Blankinship, M.D. Western Eclectic Medical College of Medicine and Surgery, Kansas City, Kan., 1908; died at his home in Umpire, Kan., May 15, from pneumonia, aged 28.

George Hugh Bacon, M.D. University Medical College of Missouri, Kansas City, 1892; of Carthage, N. M.; died at the home of his mother in Jonesboro, Ill., May 7, aged 45.

George W. Divert, M.D. Medical University of Ohio, Cincinnati, 1868; one of the oldest practitioners of Bedford County, Pa.; died at his home in Imlertown, May 23, aged 71.

Peter G. Johnson, M.D. Cleveland University of Medicine and Surgery, 1892; for 36 years a practitioner; died at his home in Battle Creek, Mich., May 18, aged 82.

Arthur Delavan DeLong, M.D. New York University, New York City, 1888, formerly of Jersey City, N. J., died at his home at Newark, May 13, aged 43.

Frederick John Garraty, M.D. University of Bishop's College, Montreal, 1904; died in Prestea, Gold Coast, West Africa, Oct. 28, 1909, from polyneuritis.

Theodore A. Kimmel, M.D. Cincinnati College of Medicine and Surgery, 1870; formerly of Kansas City, Mo.; died recently at his home in Payette, Idaho.

John W. Daly (license, Arkansas, 1903); a Confederate veteran; of Nashville, Ark.; died at the home of his son in that city, May 13, aged 75.

Robert Gordon Leverty, M.D. New York University, New York, 1885; died at his home in Bridgeport, Conn., May 27, from pneumonia, aged 37.

Harry Martin Smith, M.D. Jefferson Medical College, 1887; of Red Lion, Pa.; died in the York (Pa.) Hospital, May 19, from septicemia, aged 44.

Richard John Egan, M.D. New York University, New York City, 1886; died at his home in Harlem, N. Y., May 24, from pneumonia, aged 46.

George O. Cromwell, Missouri Medical College, St. Louis, 1876; died at his home in Nebo, Ill., March 22, from pneumonia, aged 57.

Michael A. Wesner, M.D. Jefferson Medical College, 1876; died at his home in Johnstown, Pa., May 24, from heart disease, aged 65.

George T. Rankin, M.D. Philadelphia University of Medicine and Surgery, 1868; died at his home in Linesville, Pa., May 8, aged 71.

John Cipperly, M.D. Albany (N. Y.) Medical College, 1856; died at his home in Little Falls, N. Y., February 7, aged 79.

Julius H. Eigholz, M.D. Toledo (Ohio) Medical College, 1885; died at his home in Los Angeles, April 26, aged 74.

Francis Marion Proctor, M.D. Vanderbilt University, Nashville, 1879; died at his home in Alvord, Texas, May 16.

W. P. Adkins, M.D. Tulane University, New Orleans, 1870; died at his home in Fort Worth, May 1, aged 62.

Association News

NEW MEMBERS

List of new members of the American Medical Association for the month of May, 1910:

ALABAMA

Baird, R. H., Cullman.
Dawson, J. R., Birmingham.
Jones, R. C., Mobile.
Ward, D. W., Tuscaloosa.

ARKANSAS

Cooksey, W. P., Atlanta.
Drummond, R. M., Russellville.
Early, C. S., Camden.
Evans, L. T., Barren Fork.
Gilbrech, A. H., Clarendon.
Howton, Oleander, Osceola.
Kelly, J. L., Hope.
Philp, W. H., St. Francis.
Summers, D. C., Elm Springs.

CALIFORNIA

Chaffin, R. C., Los Angeles.
Clarke, W. T., Los Angeles.
Forline, Hamilton, Redlands.
Greene, Frances M., Berkeley.
McKenney, A. C., San Francisco.
Newman, W. H., Long Beach.
Russell, P. N., Fresno.
Taylor, A. H., San Francisco.

COLORADO

Burnett, N. M., Lamar.
Campbell, W. H., Pueblo.

CONNECTICUT

Tuch, Morris, Hartford.

FLORIDA

Hurchinson, Clarence, Pensacola.
Rivers, T. M., Kissimmee.
Gaskins, J. D., Jacksonville.

GEORGIA

Gibbs, E. T., Gainesville.
Joyner, A. S., Sylvania.
Kennedy, W. D., Metter.

ILLINOIS

Ash, J. C., La Harpe.
Bailey, H. B., Rockford.
Bartholomew, E. K., Chicago.
Burns, W. I., Witt.
Chapman, W. D., Silvis.
Cohen, Hyman, Chicago.
Curtis, A. H., Chicago.
Dewey, Grace, Jacksonville.
Dattelzweig, M. F., Chicago.
Drake, C. St. Clair, Chicago.
Fitzpatrick, E. H., Pontiac.
Glasen, G. M., Chicago.
Grayson, W. F., Granite City.
Green, J. A., Rockford.
Griffeth, F. W., Elgin.
Gunn, J. C., Belleville.

Harlan, N. R., Freeport.
Harris, Monroe, Newton.
[illegible] Chicago.
[illegible]
[illegible]
Kleckner, R. E., Mattoon.
Koch, W. A., Middletown.
Liston, J. B., Shipman.
Massey, C. V., Chicago.
Moldenhauer, William J., Chicago.
Motley, E. G., Virden.
Nason, W. C., Ashkum.
Neal, J. R., Springfield.
Nyman, C. V., Rockford.
Perry, W. H., Sterling.
Seely, W. J., Red Bud.
Spyker, J. H., Decatur.
Steely, G. W., Louisville.
Thomas, E. H., Argenta.
Tonney, F. O., Chicago.
Vanatta, H. B., Lerna.
Vermeren, C., Chicago.
Wells, J. W., Waltonville.
Wetherla, W. W., Chicago.
Von Zelinski, W. F., Chicago.

INDIANA

Brown, K. T., Crawfordsville.
Cain, D. B., Evansville.
Charles, Etta, Summitville.
Dobyns, P. K., Franklin.
Dow, W. S., Indianapolis.
Harold, A. R., Indianapolis.
Harold, N. E., *Indianapolis.*
King, W. F., Columbia City.
Markley, W. H., Pennville.
Prather, S. A., Vincennes.
Reed, J. H., Logansport.
Rice, T. R., Petersburg.
Simonds, J. P., Indianapolis.
Terry, O. P., Lafayette.
Thomas, E. C., Indianapolis.

IOWA

Anspach, R. G., Colfax.
Besser, E. F., Newton.
Crary, A. W., Boone.
Earl, H. D., Cherokee.
Grimwood, W. H., Ft. Madison.
Patterson, A. W., Linden.

KANSAS

Battendieri, O. D., Pittsburg.
Billings, A. E., Topeka.
Burk, F. O., Iowa City.
Everhardy, J. L., Leavenworth.
Meyer, Grant, Lincolnville.
Moore, R. W., Arcadia.
Navem, H. A., Argentine.
Philipp, Herman, Wichita.
Ratliff, H. S., Cawker.
Reed, E. W., Holton.
Risdon, J. W., Leavenworth.
Schrader, L. M., Kinsley.
Wolfe, R. D., Council Grove.
Young, R. C., Arkansas City.
Zinke, S. G., Leavenworth.

KENTUCKY

Behrman, Michael, Covington.
Brummett, U. G., Middlesboro.
Eckler, C. M., Williamstown.
Goodloe, E. R., Little Cypress.
Gossett, W. L., Franklin.
Hopson, J. L., Cadiz.
Jones, R. M., Calvert City.
Langolf, F. A., Louisville.
Lukins, J. B., Louisville.
McEuen, H. B., St. Charles.
Offutt, W. N., Lexington.
Stone, T. W., Bowling Green.
Wahle, A. J., Louisville.
Woodburn, J. C., Bremen.

LOUISIANA

Adams, J. M., St. Joseph.
Hargrove, M. V., Oakdale.
Ledoux, A., New Orleans.
Lilly, J. G., St. Joseph.
Trahan, A. R., Lafayette.

MARYLAND

Gombel, William, Baltimore.
Laroque, H. E., Baltimore.

MASSACHUSETTS

Adamion, P. A., Boston.
Bieberbach, W. D., Worcester.
Crawford, F. W., S. Weymouth.
Shaw, J. W., Newburyport.

MICHIGAN

Arminen, K. V., Hancock.
Collins, W. E., Kalamazoo.
Force, W. H., Ludington.
Johnson, R. K., Detroit.
Kriekard, P. J., Grand Rapids.
Linn, R. S., Detroit.
Repp, W. A., Detroit.
Stone, Harriette M., Kalamazoo.

MINNESOTA

Field, Merton, Minnesota Lake.
Norman, J. F., Crookston.
Olsen, S. H., Milaca.
Ratcliffe, J. J., Aitkin.
Rogers, G. M. F., Austin.

MISSISSIPPI

Barnes, I. F., Gulfport.
Johnson, G. E., Hudsonville.
Keithly, C. L., Rome.
McLean, E. R., Cleveland.

MISSOURI

Aldridge, M. R., Jefferson City.
Armstrong, C. L., Webster Groves.
Ash, O. O., Moberly.
Baker, J. H. P., Salisbury.
Baker, Marshall, Webster Groves.
Barger, J. N., Albany.
Barker, W. S., St. Louis.
Barnhart, D. A., Huntsville.
Baumgartner, C., St. Louis.
Bell, E. T., Columbia.
Bellaire, R. F., St. Louis.
Bentele, Elizabeth, St. Louis.
Biewend, E. F., St. Louis.
Boyd, F. R., St. Louis.
Cameron, Solon, St. Louis.
Coil, P. E., Mexico.
Dalgliesh, G. D., Rockville.
Dames, A. F., St. Louis.
Davis, F. L., St. Louis.
Douglas, J. T., Ferguson.
Doyle, J. M., St. Joseph.
Drace, J. J., Kennett.
Dreyfus, J. W., Louisiana.
Dutton, C. K., Moberly.
Elkins, W. H., Crystal City.
Evans, E. E., Columbia.
Evans, R. L., Boonville.
Evers, E. T., St. Louis.
Ewing, F. C., St. Louis.
Fischer, O. F., St. Louis.
Frank, Konrad, St. Louis.
Gaertner, C. W., St. Louis.
Ginsberg, E. L., Kansas City.
Gove, H. S., Linn.
Greensfelder, Harry, Kirkwood.
Gundlach, Arthur, St. Louis.
Habermaas, Albert, St. Louis.
Haffner, E. L., Hermann.
Hall, Elizabeth L., Carthage.
Hardaway, W. A., St. Louis.
Hardy, Joseph, St. Louis.
Hawkins, W. R., Glasgow.
Hawley, T. S., St. Louis.
Heuman, G. W., St. Louis.
Hewitt, W. R., St. Louis.
Hill, J. A., Jefferson City.
Hoberecht, C. A., St. Louis.
Horst, O. C., St. Louis.
Hughes, M. R., St. Louis.
Hulen, J. C., Centralia.
Hurt, P. L., Boonville.
Janes, V. B., Cameron.
Johnson, G. A., Moberly.
Juengel, A. H., St. Louis.
Kampschmidt, A. W., Columbia.
Kempff, L. A., St. Louis.
Kesl, G. M., St. Louis.
Koch, O. W., Ballwin.
Larew, J. T., St. Louis.
Lewis, M. D., Columbia.
Magoon, F. L., St. Louis.
Martin, C. P., St. Louis.
McCall, G. D., Fulton.
McCormick, F. L., *Huntsville.*
Murray, S. A., Holden.
Musser, C. W., Metz.
Newman, Percy, St. Louis.
Niebruegge, H. J., St. Louis.
Norris, W. A., Columbia.
Owen, H. I., Fulton.
Paulin, Stanley, Kansas City.
Porth, J. P., Jefferson City.
Rodes, W. R., Mexico.
Rothwell, C. A., Mexico.
Rotteck, Julius, St. Louis.
Scholz, Phil., St. Louis.
Sewing, A. H., St. Louis.
Sharp, W. L., Little Rock.
Shumate, D. L., Kansas City.
Stewart, E. L., Kansas City.
Storrs, H. J., St. Louis.
Stevens, C. D., St. Louis.
Toalson, G. F., Mexico.
Torrance, L. B., St. Louis.
Walker, R. A., St. Louis.
Weinsberg, J. H., St. Louis.
Wilson, R. E., La Belle.
Wright, U. S., Fayette.
Yost, W. B., St. Louis.
Young, D. H., Fulton.

MONTANA

Phillips, O. S., Browning.

NEBRASKA

Langstaff, G. A., Blair.
Myers, B. L., Omaha.
Phillipsen, J. A., Lincoln.
Raines, R. F., Red Cloud.

NEVADA

Adams, A. F., Ely.

NEW HAMPSHIRE

Burtt, E. D., Lincoln.
Howland, Clifford, Bradford.

NEW JERSEY

Dougherty, A. C., Newark.
Flynn, T. H., Somerville.
Foster, G. H., Rockaway.
Miller, H. G., Millville.
Muttart, G. W., Jersey City.
Reid, J. W., Kearny.
Runyon, L. P., New Brunswick.
Winslow, J. H., Vineland.

NEW MEXICO

Dillon, A. L., Clovis.

NEW YORK

Anthony, H. E., Moravia.
Brown, H. W., Binghamton.
Brown, Sherman, *Kings Park.*
Burns, G. S., Rochester.
Carter, DeLancy, New York City.
Crisman, B. J., Utica.
Elmendorf, TenEyck, New York City.
Fincke, H. S., Astoria.
Held, R. J., New York City.
Hoobler, B. R., *New Cork City.*
Lustig, Emil, Buffalo.
Meyer, W. H., New York City.
Nash, P. I., *Coney Island.*
Prince, Howard, Byron.
Teeter, L. H., Niagara Falls.
Wilson, R. C., Ithaca.

NORTH CAROLINA

von Ruck, Silvio, Asheville.

NORTH DAKOTA

Brugman, F. A., Minot.
Macdonald, A. W., Valley City.
Sorenson, A. R., Barton.

OHIO

Batte, J. T., Cincinnati.
Blakey, H. B., Columbus.
Cox, E. H., Cleveland.
Griffin, J. G., *Kelleys Island.*
List, W. E., Cincinnati.
Morrison, F. A., Uhrichsville.
Paul, C. M., Cincinnati.
Roop, W. O., Dayton.
Samson, F. B., Cincinnati.
Smith, W. L., Toledo.
Spicer, D. M., Cleveland.
Wendelken, C. W., Portsmouth.
Williams, J. H., Cincinnati.
Workman, I. S., Gambier.

OKLAHOMA

Armstrong, D., Mead.
Coppedge, O. S., Depew.
Henderson, C. F., Chant.
Lewis, J. L., *Lawton.*
Lockett, B. L., Swink.
Long, Dock, Duncan.
McBurney, C. H., *Clinton.*
Overton, L. M., Guthrie.
Pope, A. J., Hanna.
Reeder, H. M., Asher.
Robinson, E. T., Cleveland.
Thompson, Claude A., Muskogee.
Turpin, C. H., Grandfield.

OREGON

Booth, C. L., Portland.

PENNSYLVANIA

Baltz, S. A., Mt. Braddock.
Crothers, S. R., Chester.
Dwyer, J. E., Oil City.
Eshbach, W. W., Allentown.
Heller, S. H., Lancaster.
Heim, L. D., Schuylkill Haven.
Hislop, John, Miners' Mills.
Kohberger, H. P., Pittsburg.
Lynch, H. P., Morganza.
Moore, W. D., *Germantown.*
Prowitt, H. P., Washington.
Schatz, H. A., Philadelphia.
Smith, H. F., Scranton.
Stockberger, H. J., Claridge.
Vaux, N. W., Philadelphia.
Whitehead, I. B., *Pittsburg.*

RHODE ISLAND

Calder, H. G., Providence.
Glancy, C. A., Bristol.

SOUTH CAROLINA

Graham, [illegible]
Guerry, [illegible]
Lemmon, [illegible]

SOUTH DAKOTA

Gerdes, P. H., Eureka.
Lloyd, J. C., Platte.

TENNESSEE

Biggs, V. A., Martin.
Billington, R. W., Nashville.
Dodds, O. L., *Eaton.*
Dotson, Walter, Gallatin.
Manker, R. A., Whitesburg.
Neely, J. J., Bolivar.
Paschall, J. B., Fulton.
Rice, J. C., Braden.
Thompson, M. E., Laxton.

TEXAS

Carrick, M. M., Abilene.
Cheaney, Price, Dallas.
Currie, A. B., Rainbow.
Eads, J. W., Barksdale.
Faulk, Lem., Emory.
Florence, J. H., Houston.
Janes, O. Y., Cooper.
Proctor, T. K., San Angelo.
Rogers, J. E., Barksdale.
Ross, Daniel, Denison.
Stokes, E. B., Crockett.

UTAH

Harvielle, C. P., Mammoth.
Holbrook, H. *C.,* Lehi.
Hunter, H. C., Milford.
Pyne, H. S., Provo.

VERMONT

Bogue, H. A., Richford.
Edmunds, G. F., Bristol.

VIRGINIA

Baker, C. H., Buddle.
Hough, Theodore, University.
Hubbard, J. F., Faber.
Lacy, J. B., Nathalie.
Moncure, P. St. L., Norfolk.
Nelson, J. G., Richmond.
Waldron, J. W., Grundy.

WASHINGTON

Babcock, O. D., Seattle.
Botzer, Wm., Mayfield.
Braden, A. E., Tacoma.
Burke, R. T., North Bend.
Case, S. W., Seattle.
Dallenbach, J. C., Seattle.
Dalton, M. T., Sumas.
Flynn, A. M., Tacoma.
McIntire, H. E., Auburn.
Mills, F. H., *Fort Flagler,* M.R.C.
Nather, F. B., Spokane.
Porter, L. L., North Yakima.
Quilliam, L. R., Walla Walla.
Smeall, J. S., Tacoma.
Spurgeon, G. C., Seattle.
Stevenson, A. W., Yacott.
Thompson, H. B., Seattle.
Warner, W. H., Walla Walla.

WEST VIRGINIA

Ballard, S. E., Maben.
Cook, Macdonald, Big Creek.
Hamilton, M. F., Mannington.
Harless, W. F., Clothier.
Hatfield, E. R., *Eventon.*
Hill, S. W., Switchback.
Matson, F. L., Hundred.
Owens, W. T., Mt. Clare.
Rumisell, C. C., Gassaway.

WISCONSIN

Elliott, J. T., Rhinelander.
Fidler, C. A., Milwaukee.
Gilberson, P. C., Black Earth.
Keller, J. M., Milwaukee.
Nelson, A. W., Clear Lake.
Newell, G. E., Burlington.
Sykes, H. D., Milwaukee.
Vogel, C. A., Elroy.

WYOMING

Ainsworth, H. H., Cody.

PHILIPPINE ISLANDS

Sison, A. G., Manila.

PROCEEDINGS OF THE ST. LOUIS SESSION

MINUTES OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. LOUIS, MO., JUNE 6-10, 1910

House of Delegates

First Meeting — Monday Morning, June 6

The House of Delegates convened in the auditorium of the St. Louis Medical Society at 10:35 a. m., and was called to order by the President, Dr. William C. Gorgas, Ancon, Panama.

Dr. H. Bert Ellis, California, presented a preliminary report of the Committee on Credentials, as chairman.

There being no objection raised, the report of the committee was accepted.

The General Secretary called the roll, and 74 members responded.

The President: The next order is the reading, correction and adoption of the minutes of the Sixtieth Annual Session.

Dr. Alexander R. Craig, Pennsylvania: I move that the minutes as printed be approved.

This motion was seconded and carried.

President's Address

To the Members of the House of Delegates of the American Medical Association:

It is customary for the retiring President to make suggestions to the House of Delegates looking to the betterment of the Association. The more or less close contact with the affairs of the Association for the preceding two years should place him in an advantageous position for doing this.

The Association is developing so steadily and running so successfully that I see very little room for suggestion as to change.

During the year the question was raised as to the power of our President, under our constitution, to fill vacancies that may occur in the standing committees during the interim between meetings of the House of Delegates. The matter was referred to our legal adviser. He was not clear in his own mind as to whether the President had the authority or not. I recommend that the matter be authoritatively settled.

The Association is doing a very extensive and good work and is extending its usefulness in many directions, but it seems to me that there is a tendency to take up new work and drop out of sight work already in hand. This, I think, should be borne in mind.

It is probable that most of our members attend these meetings attracted by the scientific phase, which is mostly developed in the Sections. This is a most important part of our work and should be encouraged in every way.

Our constitution says that one of the objects of our Associatino is to safeguard the material interests of the medical profession in the country at large. This phase of our work has come to the front in the last few years through our Council on Pharmacy and Chemistry. This work has been most far-reaching in protecting the people at large against all sorts of patent nostrums. As an Association we have made bitter enemies of the people engaged in the "patent-medicine" business and as they command large capital they are at present making a serious organized fight against us. This is the most altruistic part of our activity for the benefit of others or for the members of the Assoication.

Our Association is probably the most compactly organized body of men in the whole country; its branches are located in every part of the country. Through the county and state society we can reach all national legislators. This gives us great influence on legislation. During the past year our Committee on Medical Legislation has been very active and successful in shaping national legislation. This work is good and should be pushed, but as the Association feels its enlarging powers in this direction care should be taken that we do not become involved in political matters. From this time forward there will be more or less tendency to complication in this direction.

The address was referred to the Reference Committee on Reports of Officers.

Report of the General Secretary

To the Members of the House of Delegates of the American Medical Association:

I submit herewith a report for the year 1909-1910:

Membership

The membership of the American Medical Association on May 1, 1909, as shown by the report for that year was 33,935. During the past year 289 members have died, 1,937 have resigned, 625 have been dropped as not eligible, 406 have been dropped for non-payment of dues, and 95 have been removed from the rolls on account of being reported as "not found" or on account of mail returned by the Postoffice Department, making a total of 3,352 names to be deducted from the membership list. Since May 1, 1909, there have been added 3,593 names to the membership list, of which 2,628 were transferred from the subscription list, and 965 were new members. The membership of the American Medical Association on May 1, 1910, was 34,176, a net gain for the year of 241. The explanation of the apparently large number of members entered as resigned is that many who were not eligible under the by-laws were allowed to resign in preference to being entered as dropped, while many others resigned on account of age.

Committees Appointed Ad Interim

Since your last meeting, on June 11, 1909, the following committees were appointed by the president:

SELECTION OF INSIGNIA FOR THE A. M. A.

Maj. M. W. Ireland, chairman, Washington, D. C.; G. L. Taneyhill, Baltimore, Md.; C. E. Cantrell, Greenville, Texas; Samuel P. Gerhard, Philadelphia, Pa.; Samuel Wolfe, Philadelphia, Pa.

COMMITTEE ON ESTABLISHMENT OF PHYSICIANS' SANITARIUM

Edward Jackson, chairman, Denver, Colo.; A. C. Magruder, Colorado Springs, Colo.; Jefferson R. Kean, Washington, D. C.; A. T. Bristow, Brooklyn, N. Y.; H. Bert Ellis, Los Angeles, Cal.

DELEGATES TO CONVENTION ON REVISION OF PHARMACOPEIA

J. A. Capps, Chicago; George H. Simmons, Chicago; W. A. Puckner, Chicago.

Application from the Medical Association of the Isthmian Canal Zone

In the fall of 1909 an application for recognition and affiliation was received from the Medical Association of the Isthmian Canal Zone. The application, together with the accompanying documents, is referred to the House of Delegates for consideration and action, with the recommendation that it be accepted and that the Medical Association of the Isthmian Canal Zone be recognized as one of the constituent associations of the American Medical Association.

Death of Dr. Burrell

A year ago Dr. Herbert Leslie Burrell was President of the American Medical Association, and should have presided over the deliberations of the House of Delegates during the first day of the annual session. Illness, however, prevented his attendance at that meeting. Dr. Burrell did not recover from that illness and died April 27, 1910. During the year he had been unable to attend to any of his professional or college duties. Dr. Burrell was 54 years of age. In his death the Association has lost a distinguished member and a valuable officer; American surgery a skilful exponent; and the medical profession, one who has always been ready to do his duty as he saw it.

Membership of State Associations

The membership of the various constituent state associations, according to the records in the General Secretary's office on May 1, 1910, is as follows:

Alabama	1,738	New Hampshire	594
Arizona	131	New. Jersey	1,340
Arkansas	989	New Mexico	237
California	2,057	New York	6,755
Colorado	811	North Carolina	1,141
Connecticut	803	North Dakota	376
Delaware	108	Ohio	3,934
Dist. of Columbia	548	Oklahoma	1,309
Florida	339	Oregon	391
Georgia	1,145	Pennsylvania	5,351
Idaho	116	Rhode Island	367
Illinois	5,404	South Carolina	740
Indiana	2,550	South Dakota	341
Iowa	2,081	Tennessee	1,253
Kansas	1,376	Texas	3,080
Kentucky	1,986	Utah	210
Louisiana	1,068	Vermont	398
Maine	574	Virginia	1,604
Maryland	1,107	Washington	870
Massachusetts	3,303	West Virginia	971
Michigan	2,300	Wisconsin	1,730
Minnesota	1,220	Wyoming	123
Mississippi	1,001	Hawaii	58
Missouri	2,862	Philippine Islands	95
Montana	201		
Nebraska	1,001	Total	70,146
Nevada	59		

UNIFORM REGULATION OF MEMBERSHIP

The second report of the Committee on Uniform Regulation of Membership, which was enlarged at Atlantic City by the addition of five state secretaries, will be presented by that committee. The regulation of the details of individual membership is becoming more and more important to the county and state societies, as well as to the American Medical Association, and the uniform, systematic and equitable regulation of membership affairs is deserving of careful attention.

THE SECRETARYSHIP—A BIT OF HISTORY

Dr. W. B. Atkinson, my immediate predecessor, was elected permanent secretary in 1864. The office was regarded as a permanent one, as the title indicates. For several years preceding 1898 there had been considerable criticism regarding the conduct of the office—whether just or not is immaterial—and this resulted in definite action by the Association at the Denver meeting, 1898. That year certain resolutions, relative to the matter, were introduced, among which were the following:

> "*Resolved,* That a General Secretary be appointed by the Business Committee at a salary not exceeding $3,000 per year, who, under the direction of the Business Committee, shall forward the interests of the Association in every way possible.
>
> "*Resolved,* That the Business Committee be directed to consider the matter and report to the Association in regard to the feasibility of the plan proposed."

The Business Committee, on the following day, reported:

> "While the Committee fully agree as to the desirability of having much more active secretary work done for the Association, and believe that the plan proposed would greatly increase the scope and usefulness of the Association, it is not prepared at the moment to recommend the adoption of the resolution. It is a matter of such very great importance that further consideration of the details involved is necessary, and as it may possibly involve a change in the Constitution and By-Laws, your Committee has decided to recommend that the matter lie over for one year, and hereby gives notice that it proposes such changes, if any are necessary, in the Constitution and By-Laws at the next annual meeting of the Association."

Later, as the matter involved the expenditure of money, it was referred to the Trustees to report the following year. The Business Committee also submitted an amendment to the By-Laws, providing for the annual election of a Secretary.

At the Columbus meeting, 1899, the matter came before the Association in three ways; from the committee to which the proposed amendment of the By-Laws had been referred; from the Board of Trustees; and from the President, Dr. J. M. Mathews, in the annual President's address. I quote from the latter:

> "For several years there has been a heated debate, if not wrangle, at each annual meeting, in general session, over the secretaryship. This is both unseemly and undignified, and is to be much deplored. It seems to me that there is an easy solution to this matter. Let the editor of our Journal be the secretary of the Association. The Board of Trustees has wisely insisted that he devote his whole time to the Journal. It does, therefore, appear that the secretaryship should be one of his duties. By so acting he is brought into a closer relation with the business management of the Association and with the active membership of the same. He would himself be responsible for a correct report of all proceedings, and be enabled to keep them without fault. The question whether or not any addition should be made to his salary for this additional work can be determined by the board of trustees. Our present secretary has served us long and well, and for his services in the past the Association should, and no doubt does, feel deeply obligated to him. I am sure that he would be the first to acquiesce in any move that would enhance the business interests or the prosperity of the Association. I therefore very respectfully offer the suggestion as above stated."

The Committee's recommendations regarding the change of By-Laws and the recommendations of the Trustees were formulated into amendments to the By-Laws, among which was the following:

> "Each officer, except the Secretary, shall hold office for one year, and until his successor is selected. The Editor of the JOURNAL of the American Medical Association shall be the Secretary of this Association, and shall serve as such without additional compensation."

Two years later, in 1901, at my suggestion, the first "shall" in the second sentence above quoted was changed to "may," again placing the election of General Secretary in the hands of the Association, and later all mention of the connection between the two offices was eliminated from the By-Laws.

Thus, in 1899, being editor of THE JOURNAL, against my wishes and under protest I became the secretary. Having accepted the position I tried to perform what I considered the duties pertaining to the office. The work increased rapidly, and within two years I found that I was devoting nearly as much time and energy to the secretarial as to THE JOURNAL work.

About six years ago I suggested to the Board of Trustees that I relinquish the secretaryship on account of the amount of detail work connected therewith. The Board of Trustees, however, advised against this, but recommended and authorized the employment of an assistant to the secretary whose duty should be to look after and carry out the details of that work. After some time spent in looking for a man fitted for the place, the position was tendered to Dr. F. R. Green who accepted it, and in April, 1905, assumed the duties of Assistant to the General Secretary. Since that time he has been taking care of most of the secretarial work.

However, I had decided not to hold the office for longer than ten years, and last year, 1909, fully expected to ask you to elect some one else. For reasons not necessary to mention, I did not do so.

I think the time has come, however, when I should ask you to relieve me of the responsibilities of the office of General Secretary, and this I now do. I realize that it is not usual to refuse a thing, especially an elective office, before it is offered. I think it better, however, to make the announcement now, so that there may be ample time for you to consider carefully whom you shall select for the position.

I want to take this opportunity of thanking you for the kindness, cooperation and assistance that I have received at your hands. Eleven consecutive years I have been unanimously elected General Secretary, twice at the General Meeting before the reorganization, and nine times by the House of Delegates.

During this time much has been accomplished. For only a minor part of what has been done can I claim any credit, but what little may have been accomplished through my efforts was made possible because a host of splendid men in our profession have loyally and unselfishly given their support and cooperation to the work.

Respectfully submitted. GEORGE H. SIMMONS,
General Secretary.

This report, on motion, was referred to the Reference Committee on Reports of Officers.

Report of the Board of Trustees

To the Members of the House of Delegates of the American Medical Association:

The progress made by this Association during the past year has been most encouraging. Anyone who read the elaborate and instructive reports presented by the permanent Committees and Councils to this body at its meeting a year ago, could not fail to be impressed by the earnest, hard work done by these Committees and by the great value of that work to the profession as well as to the people.

As these Committees report directly to this body your Board of Trustees refrains from presenting the details of their work for the past year, but recommends to your careful study and consideration their forthcoming reports, feeling certain that the members of these Committees who do this work at great sacrifice of time, energy and often money will receive at your hands the earnest encouragement and hearty approbation which they deserve.

It is one of the most encouraging features of our organization that men of the character of those forming these Committees will so generously give of their time and labor for the benefit of all.

In looking over these reports one is struck by the numerous lines along which the activities of the Association are extending. Instead of a small body of men meeting once a year for scientific and social purposes we now find a vast organization extending into every county and almost every town in the land deeply engaged not only in the scientific work of the profession but also in the solution of economic and sociologic problems in a manner scarcely dreamed of by the most enthusiastic worker but a few years ago.

Among the numerous subjects which the organization has taken up may be mentioned: The systematic and thorough investigation of the medical teaching institutions of the United States, with a view to elevating the standard of medical education and the moral and scientific attainments of those who seek to enter the profession.

The careful study of the various state laws governing the practice of medicine with a view to the drafting of a uniform medical practice act which shall secure to the people the greatest degree of protection and to the profession the greatest justice:

The systematic education of the people in matters relating to both public and personal hygiene, to the prevention of blindness, to the care of dependents, to the prevention of the propogation of the insane and of the criminal, etc.:

The passage of such laws by the national and state governments as shall secure to the people pure, wholesome food and pure drugs:

The establishment of a National Department of Health with powers and duties commensurate with the importance of the subject:

The adoption of a uniform system of nomenclature and classification of diseases:

The careful study of the rules and regulations governing membership in county and state societies with a view to securing greater uniformity thereof and for the purpose of improving if possible the plan of organization of the local, state and national bodies:

The education of the people in regard to the dangers of the patent medicine frauds and of the profession in regard to the composition and the effects of the proprietary drugs, new remedies, etc.

These are by no means all of the problems which the Association is undertaking but they are sufficient to indicate the various lines along which its activities are extending, and while the Board of Trustees wishes it distinctly understood that it is in accord with all of these movements, yet it cannot refrain from uttering a word of caution against attempting too many things at a time lest we dissipate our energies and forces in a multiplicity of aims.

As the Council on Pharmacy and Chemistry reports to the Board of Trustees, a few words concerning the work done by this Council during the past year may be of interest.

The amount of work done has greatly exceeded that of any previous year and the results of the work as published from week to week in THE JOURNAL have been of the greatest practical value to every physician. In support of this statement we wish to mention briefly the work done by the Council in the examination of the numerous so-called meat extracts and meat juices with which the market, both public and professional, has been flooded.

It will be acknowledged by all that the nourishing of the sick is a subject of the most vital importance and therefore, any product for which the manufacturer claims unusual nutritive value should have its worth carefully determined by competent judges.

After a most exhaustive examination of these products it was found that the meat extracts are practically devoid of nutritive bodies and that while some of the meat juices were shown to contain considerable amounts of bodies of great food value, many of the products on the market which were claimed to be meat juices proved to be nothing but meat extracts or similar non-assimilable products.

Since the prescribing of such products by physicians, under the mistaken idea that they possess food value, must result in harm to the patients, the Council investigated those most widely advertised and published its findings in THE JOURNAL so that no physician need be misled any longer by the erroneous claims made by the manufacturer for any of these products.

Another class of products of great interest and importance at this time and concerning which reliable information has been difficult to obtain is that of the various serums and vaccines.

During the past year the Council has done a most timely piece of work in this direction and has prepared and published descriptions of the several products as they are found on the American market.

These two classes are mentioned, as they are somewhat out of the ordinary, simply to illustrate the character of the work which the Council is doing. That the magnificent work done by the Council is receiving just recognition beyond the confines of our own land is well shown by the fact that during the past year a number of prominent European firms have taken active measures to have all of their products listed by the Council.

One of these firms has opened a branch office in this country because it found that the drug firm which had acted as its representative was also engaged in the exploitation of patent medicines. The submission of products by the foreign firms demonstrates that the listing of new products with New and Nonofficial Remedies is being felt essential as an indication of good faith with the profession.

It may be stated that the Council has examined practically all the non-official articles now on the market and that those not listed by it are deemed by it unworthy of consideration by the profession.

In the main the work of the Council thus far has been to determine whether or not those dealing in medicines were telling the truth.

This work really should have been done by the federal, state and municipal authorities but it required the courage of those who constitute the Council and the prestige of the American Medical Association to antagonize the powerful interests connected with proprietary medicines.

The amount of work done in the Chemical Laboratory in our own building has increased greatly so that it is impossible to even mention all of the products and compounds which have been investigated during the past year.

It seems almost unbelievable that any person or firm would attempt to perpetrate such gross frauds on the profession and the people as have been uncovered in our own laboratory.

For instance a product called "Health Grains" which is offered as a remedy for dyspepsia, indigestion, nervousness, etc., was found to consist of nearly 90 per cent. sand and about 10 per cent. sugar.

Another product sold at an exorbitant price with outrageously exaggerated claims as a face preparation, was found to be about 90 per cent. ordinary Epsom salts and 10 per cent. borax.

A certain product which was submitted to the Council by the manufacturer was found not to contain the substances specified on the label. When attention was called to the fact the manufacturer attempted to explain the discrepancy between the label and the contents by saying it was due to a lack of coordination between the various departments. Remember this was not a patent medicine but a proprietary article offered to and used by the physician. The name of the manufacturer has been withheld because the article has been taken off the market.

Numerous other incidents similar to the above might be mentioned but sufficient has been said to indicate the character of the work done in the laboratory.

Your Board of Trustees desires to bring to your attention at this time a matter of great importance, and in doing so it does not wish to be understood as attempting to anticipate the report nor in any way to interfere with the prerogatives of the special committee appointed by you to consider the advisability of consolidating certain of the present committees, but it wishes to call your attention to the fact that in your earnest endeavor to bring about certain very desirable results you have appointed perhaps unconsciously, a multiplicity of committees whose duties so overlap in many directions as to lead to an unnecessary duplication of the work with a concomitant duplication of expense and loss of energy, and a lack of cooperation and concurrence among the committees renders negative or ineffectual much of the work undertaken.

It will be recalled that those Committees which have been centralized have been productive of the best results. It is therefore believed that if the various Committees which now exist with a similarity of duties were centralized in a single Bureau with a paid secretary and stenographer with headquarters in THE JOURNAL building much more effective work would be done and greater results accomplished.

This does not in any sense mean that fewer individuals would be engaged in the work, as the Bureau should have the power to establish any number of sub-committees to carry on the work along special lines, but it means simply this, that there would be a head to systematize and correlate the work of the various sub-committees.

Closely related to this subject is that of the Women's Committees on Public Educational Matters.

It may be well to state at the outset that the Board of Trustees is in entire sympathy with the movement and believes that an immense amount of good might be accomplished in the manner outlined.

It will be remembered, however, that the resolution having for its object the formation of the Women's Committee was introduced on the afternoon of the last day of the session and owing to a lack of time was passed unanimously by those present without due consideration.

The accidentally faulty wording of the resolution therefore escaped detection and while the mover thereof undoubtedly believed that the resolution, as was intended, actually created a women's Committee of the House of Delegates or of the A. M. A., as a matter of fact it failed to do either and the Committee therefore became a self-appointed one.

The Board of Trustees had no official knowledge of the matter until called upon some time later to meet certain expenses already incurred by the self-appointed Committee. The board believes this a matter of considerable importance.

Should the centralized Bureau above mentioned be created by the House of Delegates at this time, then this Committee would be properly taken care of as a part of the Bureau, otherwise some action should be taken giving this Committee proper standing and defining its duties.

We are pleased to say that the new building authorized by you at your last meeting is in process of erection. Considerable delay was experienced in securing satisfactory bids for the work on account of industrial conditions, but the contracts call for the completion of the building by October 1 and unless some unforeseen complication arises it seems likely that the terms of the contract will be fulfilled.

Appended hereto will be found a detailed report of the business side of the Asssociation and of The Journal, together with an elaborate report from the auditors, bringing everything along these lines down to the end of the fiscal year.

In conclusion the Board may be permitted to express its belief that the future of the Association never was so bright as at the present time.

The profession through the land, year by year is becoming more firmly united in bonds of fraternal harmony and every feeling of internal strife is yielding to the universal desire to uplift the profession and to cause such a dissemination of the knowledge of scientific medicine as shall bring to all mankind that greatest of blessings, good health. But in the earnest endeavor to bring to a fruitful issue the ends toward which we strive, let us guard most carefully against the tendency which so frequently and so insidiously creeps into an organization of the strength of this to dip into politics and thus pollute the honorable traditions of our profession.

Remember that our strength lies in a righteous cause honestly fought.

Respectfully submitted, W. T. Sarles,
W. W. Grant, C. A. Dougherty,
Phillip Marvel, W. T. Councilman.
C. E. Cantrell, Wisner R. Townsend, Secretary.
Phillip Mills Jones, M. L. Harris, Chairman.

Addenda to Trustee's Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of The Journal of the American Medical Association from Jan. 2, 1909, to Dec. 25, 1909 inclusive, 52 issues, was as follows:

January 2	53,891		July 3	55,440	
January 9	53,253		July 10	55,379	
January 16	53,319		July 17	55,145	
January 23	53,338		July 24	55,028	
January 30	53,283		July 31	54,872	
		267,084			275,864
February 1	53,476		August 7	55,333	
February 13	53,381		August 14	56,469	
February 20	53,457		August 21	54,600	
February 27	53,452		August 28	54,602	
		213,766			221,004
March 6	57,052		September 4	54,594	
March 13	55,644		September 11	54,519	
March 20	56,339		September 18	54,213	
March 27	56,409		September 25	54,140	
		225,444			217,466
April 3	55,923		October 2	54,050	
April 10	56,040		October 9	54,408	
April 17	56,368		October 16	56,044	
April 24	56,414		October 23	56,128	
		224,745	October 30	56,707	
May 1	59,106				277,337
May 8	56,528		November 6	54,746	
May 15	54,730		November 13	57,034	
May 22	55,591		November 20	54,957	
May 29	54,814		November 27	57,250	
		280,769			223,987
June 5	56,186		December 4	57,190	
June 12	56,048		December 11	57,123	
June 19	55,120		December 18	57,334	
June 26	55,108		December 25	57,224	
		222,462			228,871

Total issue for twelve months..........2,878,799
Weekly average..........55,361

As will be noticed, the total number of copies issued during 1909 was 2,878,799. The total issue for 1908 was 2,806,900, an increase of 71,899 copies in 1909 over 1908, or a weekly average increase of 1,382 copies.

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

This table gives the number of physicians (based on the second edition of the American Medical Directory) in the United States, number receiving The Journal and the approximate percentage in each state. Copies to physicians in the United States Army, United States Navy, Marine-Hospital Service, etc., omitted:

State.	Physicians in State.	Number Receiving Journal.	Approximate Per Cent.
Alabama	2,287	648	28.3
Arizona	246	142	57.7
Arkansas	2,553	595	23.4
California	4,313	1,871	43.3
Colorado	1,690	798	47.2
Connecticut	1,424	675	47.4
Delaware	220	78	35.4
District of Columbia	1,231	564	45.8
Florida	786	318	40.4
Georgia	2,887	762	26.3
Idaho	343	161	46.9
Illinois	9,744	5,023	51.5
Indiana	5,306	1,779	33.5
Iowa	3,624	1,854	51.1
Kansas	2,650	1,119	42.2
Kentucky	3,708	1,184	31.9
Louisiana	1,798	735	40.8
Maine	1,198	407	33.9
Maryland	2,012	1,006	50.0
Massachusetts	5,577	2,365	42.4
Michigan	4,109	1,806	43.9
Minnesota	2,204	1,288	62.9
Mississippi	2,054	515	25.0
Missouri	6,332	2,047	32.3
Montana	417	219	52.5
Nebraska	1,776	738	41.5
Nevada	177	75	42.3
New Hampshire	679	288	42.4
New Jersey	2,455	977	39.7
New Mexico	367	172	46.8
New York	14,117	4,858	34.4
North Carolina	1,761	586	33.2
North Dakota	552	341	61.7
Ohio	7,838	2,807	35.8
Oklahoma	2,703	672	24.8
Oregon	782	349	44.6
Pennsylvania	11,056	4,686	42.3
Rhode Island	720	317	44.0
South Carolina	1,141	415	36.3
South Dakota	607	328	54.0
Tennessee	3.303	779	23.5
Texas	5,789	1,527	26.3
Utah	359	213	59.3
Vermont	663	211	31.8
Virginia	2,215	843	38.0
Washington	1,404	700	49.8
West Virginia	1,608	568	35.3
Wisconsin	2,518	1,360	54.0
Wyoming	202	86	42.5

The following table shows the number of members and of subscribers for each year for the past ten years:

	Members.	Subscribers.
January 1, 1900	8,445	4,633
January 1, 1901	9,841	8,339
January 1, 1902	11,107	10,795
January 1, 1903	12,553	12,378
January 1, 1904	13,899	14,674
January 1, 1905	17,570	15,698
January 1, 1906	20,826	17,669
January 1, 1907	26,255	20,166
January 1, 1908	29,382	20,880
January 1, 1909	31,999	18,983
January 1, 1910	33,032	19,832

The above table shows that there was an increase of 1,033 in the membership list taking The Journal, and an increase of 849 in the subscriber's list, or a total net increase of 1,882.

The above do not include *ex-officio* members, exchanges, complimentary copies to libraries, agents, etc.

During the year 1909, 2,706 subscribers were transferred to the membership list.

The actual increase in our mailing list during 1909 was 1,970. During this period, however, there were added to the list 11,504 names. The difference—9,534—represents the discontinuation by death, by ineligibility to membership, by resignation, by non-payment of dues and subscriptions; also a large number were temporarily dropped and restored.

The deaths alone amount to quite a large number. We are not able to give the exact figure. A goodly portion of the members of the Association are elderly men, and the grim reaper each year makes no small inroad on the mailing list. The ratio of deaths among physicians last year was a little over 16 per thousand. The proportion would certainly be this large among our members.

Treasurer's Report

REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE YEAR ENDING DEC. 31, 1909

RECEIPTS

1909.	
Jan. 1—Cash balance in First National Bank........	$ 3,880.46
Jan. 30—Cash received from Editor of JOURNAL........	25,000.00
March 31—Cash received from Editor of JOURNAL......	10,000.00
Sept. 14—Interest at 3 per cent. on certificates of deposit in First Trust and Savings Bank..................	2,244.57
Interest at 2 per cent. on checking account in First National Bank from August to December, 1909, inc. (when balance was over $5,000)...................	55.69
Interest coupons, 54 $1,000 bonds at 4 per cent........	2,160.00
	$ 43,340.72

DISBURSEMENTS

1909.	
Jan. 30—By order of Trustees, bought certificate of deposit at 3 per cent. in First Trust and Savings Bank.	$ 25,000.00
March 31—By order of Trustees, bought certificate of deposit at 3 per cent. in First Trust and Savings Bank.	10,000.00
Dec. 31—Cash balance in checking account First National Bank	8,340.72
	$ 43,340.72

JAN. 1, 1910, PROPERTY OF AMERICAN MEDICAL ASSOCIATION IN HANDS OF TREASURER

	Cost.	Par Value.	
Cash balance in checking account First National Bank..			$ 8,340.72
Certificates of deposit at 3 per cent. in First Trust and Savings Bank......................................			100,000.00
35/1000 bonds U. P. Ry., 1st 4s..	$ 5,207.50	$ 5,000.00	
5/1000 bonds Erie Ry., 1st 4s..	4,932.50	5,000.00	
10/1000 bonds Reading Gen. 1st 4s	9,602.50	10,000.00	
14/1000 bonds Chicago Sch. 1st 4s	15,168.13	14,000.00	
10/1000 bonds A. T. & S. Fe 1st 4s	9,521.25	10,000.00	
10/1000 bonds B. & O. Ry. 1st 4s	9,800.00	10,000.00	
	$54,231.88	$54.000.00	54,000.00
			$162,340.72

Respectfully submitted,

FRANK BILLINGS, *Treasurer.*

Auditor's Report

MARWICK, MITCHELL & CO., CHARTERED ACCOUNTANTS

CHICAGO, Feb. 2, 1910.

To the Board of Trustees of the
American Medical Association, Chicago, Ill.

Dear Sirs:

In accordance with your instructions, we have audited the accounts of your Association for the year ended December 31, 1909. We now submit our report thereon, together with the statements detailed in the index appended hereto.

Our examination was conducted along the lines of previous audits and included an inspection of the bonds, which are detailed in Schedule "6," and the certificates of deposit. The cash on hand and in bank was verified by actual count and certification respectively. The vouchers for disbursements were all in order and properly authorized by responsible officers. We made test checks on the voluminous sources of the Association's revenue.

The balance sheet, recorded in Exhibit "A," is in accordance with the books of the Association and presents, in our opinion, a full and fair statement of its financial position on December 31, 1909, as revealed by the books subject, however, to the consideration of the omission of the accrued liability in respect of taxes, and of that in respect of subscriptions and memberships paid in advance. This latter liability is offset in a measure by subscriptions and memberships earned but outstanding, of which no account is taken in the balance sheet. There has also to be considered the probable loss on doubtful accounts receivable.

The following comparative, summarized statement of the assets and liabilities of the Association, as at December 31, 1909 and 1908, is of interest:

	——DECEMBER 31——			
	1909	1908	INCREASE	DECREASE
Assets:				
Property and Plant.	$173,081.86	$183,737.15	....	$10,655.29
Investments	154,231.88	119,231.88	$35,000.00	....
Current Assets....	72,148.42	52,844.97	19,303.45	....
Total Assets....	$399,462.16	$355,814.00	$43,648.16	....
Liabilities	2,926.95	1,146.18	....	1,780.77
Surplus Assets .	$396,535.21	$354,667.82	$41,867.39	

The increase in surplus assets, namely, $41,867.39, arises from the net surplus income of *the Association* for the year under review. Details of the income account, bringing out this surplus, are shown in Exhibit "B" and supplementary schedules.

A perusal of the foregoing statement will show the disposition of the year's surplus income. It has been invested principally in $35,000.00 of certificates of deposit.

The work of the office force is conducted in an intelligent and accurate manner.

We take pleasure in recording our appreciation of the courtesies extended to our representatives and shall be pleased to furnish any information desired on the accounts. Yours truly,

MARWICK, MITCHELL & CO., Chartered Accountants.

INDEX TO STATEMENTS

EXHIBITS
"A" Balance Sheet as at Dec. 31, 1909.
"B" Income Account for the year ended Dec. 31, 1909.
SCHEDULES
"1" Publication Expenses for the year ended Dec. 31, 1909.
"2" General Expenses for the year ended Dec. 31, 1909.
"3" Atlantic City Session Expenses for the year ended Dec. 31, 1909.
"4" Depreciation Reserved for the year ended Dec. 31, 1909.
"5" Association Expenditures for the year ended Dec. 31, 1909.
"6" Bonds as at Dec. 31, 1909.

EXHIBIT "A"

BALANCE SHEET AS AT DEC. 31, 1909

ASSETS

Property and Plant:		
Real Estate and Buildings...........................		$108,880.82
Machinery		41,456.97
Metal and Type		10,941.87
Furniture and Fixtures............................		8,955.19
Stereotype Plant		1,661.40
Library		1,185.61
Total Property and Plant........................		$173,081.86
Investments:		
Bonds at Cost, Schedule "6".........................		$ 54,231.88
Certificates of Deposit............................		100,000.00
Total Investments		$154,231.88
Current Assets:		
Cash:		
Commercial National Bank of Chicago...	$23,030.51	
First National Bank of Chicago........	8,340.72	
Office Fund	50.00	
		31,421.23
Accounts Receivable:		
Advertising	$15,759.92	
Directory	10,393.20	
Reprints	1,273.25	
Jobbing and Miscellaneous.............	1,730.83	
		29,157.20
Inventory—Materials and Supplies..............		10,899.88
Insurance Prepaid		460.11
Bills Receivable		210.00
Total Current Assets...........................		72,148.42
Total		$399,462.16

LIABILITIES

Accounts Payable		$ 268.58
Advance Payments on Archives of Internal Medicine...		1,587.37
Directory Suspense Account.........................		921.48
Directory Information Account......................		149.52
Surplus:		
Amount thereof at Dec. 31, 1908........	$354,667.82	
Net Surplus Income for the year ended Dec. 31, 1909.......................	41,867.39	
		396,535.21
Total		$399,462.16

EXHIBIT "B"

INCOME ACCOUNT FOR THE YEAR ENDED DEC. 31, 1909

Revenue:		
		$147,543.50
		146,151.19
		97,413.52
Jobbing		29,110.54
Directory		40,533.46
Atlantic City Session		9,037.44
Reprints		7,526.70
Archives of Internal Medicine.....................		5,782.02
Book Account		3,216.58
Physicians' Manual		1,517.94
New and Nonofficial Remedies......................		559.50
Buttons		361.20
Gross Revenue		$488,753.59
Expenses:		
Publication (Schedule "1").............	$266,006.89	
General (Schedule "2")..................	125,117.99	
Atlantic City Session (Schedule "3")....	8,368.10	
Depreciation (Schedule "4")............	9,241.82	
		408,734.80
Net Revenue		$ 80,018.79
Other Income:		
Interest on Bonds	$ 2,160.00	
Interest on Treasurer's Account.........	2,756.65	
House Rental—Less Expenses..............	2,315.88	
	$ 7,232.53	
Deduct:		
Loss by bad accounts and notes—less recoveries	923.17	
		6,309.36
Gross Income		$ 86,328.15
Deductions from Income:		
Cost of additions to building about to be torn down, previously charged to capital.	$ 6,158.03	
Association Expenditures (Schedule "5").	38,302.63	
		44,460.66
Net Income		$ 41,867.49

SCHEDULE "1"

Publication Expenses for the Year Ended Dec. 31, 1909

JOURNAL:		
Materials and Supplies:		
Paper Purchases	$100,800.23	
Paper—Inventory—Decrease	2,096.71	
Ink	3,798.38	
Electros	3,775.93	
Miscellaneous Supplies	2,206.37	
	$112,677.62	
Deduct: Waste Paper Sold	3,879.41	
		$108,798.21
Labor		89,461.60
Binding		2,078.61
Editorials, News and Reporting		8,198.26
Total JOURNAL Publication Expenses		$208,536.68
SECOND EDITION OF DIRECTORY:		
Materials and Supplies	$ 2,749.26	
Salaries	34,113.08	
Information	7,982.86	
Jobbing	4,481.10	
Binding	2,168.50	
Indexing	824.30	
	$ 52,319.10	
Deduct: Directories on hand at Dec. 31, 1909	1,980.00	
Total Directory Publication Expenses		50,339.10
Archives of Internal Medicine		5,390.22
Physicians Manual		947.91
New and Nonofficial Remedies		792.98
Total Publication Expenses		$266,006.89

SCHEDULE "2"

General Expenses for the Year Ended Dec. 31, 1909

Salaries		$ 37,975.29
Postage:		
JOURNAL—Second Class	$21,025.61	
Directory	3,356.33	
Archives of Internal Medicine	333.98	
General	11,056.70	
		35,772.62
Commissions:		
JOURNAL	10,434.09	
Directory	3,030.04	
Archives of Internal Medicine	1,644.91	
Buttons	364.94	
		15,473.98
Plant:		
Repairs and Renewals	$ 2,513.84	
Power	2,435.54	
Light	2,200.32	
Fuel	1,221.06	
Building Maintenance	385.41	
		8,756.17
Insurance and Taxes		2,906.41
Office Jobbing		2,663.08
Discount		2,307.78
Collection Commissions		2,337.94
Express and Cartage:		
On Second Edition Directories	$ 3,517.79	
General	2,102.09	
		5,619.88
Agents' Salaries		1,830.00
Advertising:		
Directory	367.45	
Archives of *Internal* Medicine	161.60	
		529.05
Exchange		1,443.76
Legal		944.90
Office Supplies		603.71
Traveling Expense		584.05
Telephone and Telegraph		380.61
JOURNALS Returned		75.11
Book Account		2,697.59
Buttons		200.53
Miscellaneous *Expense*		2,015.53
Total General Expenses		$125,117.99

SCHEDULE "3"

Atlantic City Session Expenses for the Year Ended Dec. 31, 1909

President's Reception	$2,222.25
Rentals	1,675.00
Transportation and Board	726.30
Jobbing	640.72
Registration	632.89
Commercial Exhibit	572.30
Badges and *Buttons*	522.20
Daily *Bulletin*	450.00
Repairs to Exhibit Hall	425.00
Information Bureau and Post-Office	102.50
Freight and Express	52.33
Dr. Marvel	28.94
Supplies	27.50
Miscellaneous	290.17
Total	$8,368.10

SCHEDULE "4"

Depreciation Reserved for the Year Ended Dec. 31, 1909

Machinery	$4,606.33
Buildings	2,698.78
Furniture and Fixtures	817.70
Type	458.44
Metal	358.73
Stereotype Plant	184.60
Laboratory Equipment	117.24
Total	$9,241.82

SCHEDULE "5"

Association Expenses for the Year Ended Dec. 31, 1909

Pharmacy and Chemistry:		
Salaries	$6,893.08	
Meetings	515.50	
Drugs	221.48	
Postage	189.78	
Supplies	186.21	
Jobbing	165.15	
Analyses	30.00	
Express	22.72	
		$8,223.92
Medical Education:		
Salaries	$3,314.40	
College *Inspection*	1,052.40	
Meetings	1,273.45	
Postage	172.50	
Jobbing	132.50	
Information	90.75	
Supplies, etc.	33.63	
		6,069.63
Medical Legislation:		
Salaries	$1,404.55	
Expenses—Dr. C. A. L. Reed	793.93	
Meetings	399.84	
Postage	126.00	
Jobbing	87.32	
Information	24.15	
		2,835.79
Board of Public Instructions		598.65
Defense of Medical Research		144.02
Public Education		635.46
Organization:		
Dr. J. N. [illegible]	$6,000.00	
Dr. J. N. [illegible]	2,113.05	
Dr. J. H. [illegible]	600.00	
Dr. J. H. [illegible]	300.00	
Lectures	442.10	
Jobbing	689.85	
Traveling Expense—Dr. Green	132.70	
Bulletin Postage	51.90	
Express and Telegrams	31.86	
		10,361. 6
Association Account:		
Trustees' Meetings	$3.508.17	
Reporting Sections	1,579.54	
Scientific Research	850.00	
Scientific Exhibit	585.50	
Salary—Assistant *to* General Secretary	999.99	
Section Secretaries	600.00	
Honorariums	400.00	
Reporting Sections	320.70	
Jobbing	195.78	
Miscellaneous	394.02	
		9,433.70
Total		$38,302.63

SCHEDULE "6"

Bonds as at Dec. 31, 1909

Particulars	Par Value	Cost
5 Atchison, Topeka & Sante Fe Ry. Co. 4 per cent. 100-year gold bonds	$ 5,000.00	$ 4,988.75
5 Erie Railroad Co. 4 per cent. gold bonds.	5.000.00	4,932.50
5 Baltimore & Ohio Railroad first mortgage *4 per cent. bonds*	5,000.00	5,032.50
5 Reading Company general mortgage 4 per cent. bonds	*5,000.00*	*4,870.00*
5 Union Pacific Railroad Co. first mortgage 4 per cent. bonds	5,000.00	5,207.50
14 City of Chicago 4 per cent *school bonds*.	14,000.00	15,168.13
5 Reading Company and the Philadelphia & Reading *Coal & Iron Co.* general mortgage 4 per cent., *payable January* and July, Nos. 29366, 29367, 24483, 24482, 66964, par value of $1,000.00 each at 94½	*5,000.00*	*4,732.50*
5 Atchison, Topeka & Santa Fe Ry. Co. first mortgage 4 per cent bonds payable April and October. *Principal* due 1995, Nos. 32785, 35162, *40517, 40516*, 40515. Par value of $1,000.00 each at 90½	*5,000.00*	4,532.50
5 Baltimore & Ohio Railroad Co first mortgage 4 per cent. *bonds payable* April and October. Principal due 1948, Nos. 53591, 53594, 53593, *34986, 34987*. Par value of $1,000.00 each at 95	5,000.00	4,767.50
Total	$54,000.00	$54,231.88

Report of Board of Trustees

Dr. M. L. Harris, Chairman, read the report of the Board of Trustees, which was referred to the Reference Committee on Reports of Officers.

Reference Committees Appointed

REFERENCE COMMITTEE ON REPORTS OF OFFICERS

George W. Guthrie, Pennsylvania, Chairman.
W. B. Russ, Texas.
C. R. P. Fisher, New Jersey.
D. S. Fairchild, Iowa.
Victor H. Stickney, No. Dakota.

REFERENCE COMMITTEE ON LEGISLATION AND POLITICAL ACTION

J. W. Clemmer, Ohio, Chairman.
Oscar Dowling, Louisiana.
M. W. Ireland, U. S. Army.
G. B. Young, U. S. P. H. & M.-H. S.
I. C. Chase, Texas.
(Committee on Medical Legislation, ex officio.)

REFERENCE COMMITTEE ON MEDICAL EDUCATION

A. Work, Colorado, Chairman.
Horace D. Arnold, Massachusetts.
T. D. Tuttle, Montana.
J. B. Bullit, Mississippi.
Joseph Capps, Section on Practice of Medicine.
(Council on Medical Education, ex-officio.)

REFERENCE COMMITTEE ON SECTIONS AND SECTION WORK

J. E. Weeks, New York, Chairman.
E. Carson Hay, Arkansas.
Alfred D. Sawyer, Maine.
C. J. Smith, Oregon.
O. J. Brown, Massachusetts.

REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

A. L. Wright, Iowa, Chairman.
D. D. Bosworth, Tennessee.
J. Riddle Goffe, New York.
F. W. Robbins, Michigan.
J. N. Jenne, Vermont.

REFERENCE COMMITTEE ON HYGIENE AND PUBLIC HEALTH

W. N. Wishard, Indiana, Chairman.
J. H. White, Section on Preventive Medicine and Public Health.
William Brumby, Texas.
R. D. Alway, South Dakota.
C. S. Sheldon, Wisconsin.

REFERENCE COMMITTEE ON CONSTITUTION AND BY-LAWS

Alexander R. Craig, Pennsylvania, Chairman.
W. H. Sanders, Alabama.
E. W. Weis, Illinois.
A. T. McCormack, Kentucky.
Arthur Sweeney, Minnesota.

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS.

T. A. Woodruff, Section on Ophthalmology, Chairman.
Edwin Walker, Indiana.
Ridgely B. Warfield, Maryland.
E. A. Hines, South Carolina.
E. J. Goodwin, Missouri.

COMMITTEE ON CREDENTIALS

H. Bert Ellis, California, Chairman.
J. H. J. Upham, Ohio.
D. C. Brown, Connecticut.
W. W. Richmond, Kentucky.
W. E. Anderson, Virginia.

JUDICIAL COUNCIL

William C. Woodward, District of Columbia, Chairman.
L. M. Shaw, Nebraska.
L. A. Hahn, Oklahoma.
C. S. Huffman, West Virginia.
G. K. Angle, New Mexico.

THE PRESIDENT: We will now listen to the reports of Standing Committees.

Report of the Judicial Council

DR. C. E. CANTRELL, Texas: As chairman of the Judicial Council, I wish to say that the Council has no report to make inasmuch as nothing has come before us on account of the perfect working of the law settling all ethical matters in the county medical societies and the state associations.

Report of the Committee on Medical Legislation

DR. CHARLES A. L. REED, Ohio, Chairman, read this report.

To the House of Delegates of the American Medical Association:

Your Committee on Medical Legislation submits herewith its annual report and as a part thereof submits copies of the American Medical Association Bulletin for March 15 and May 15, 1910, containing the record of the Joint Conference on a Model Medical Practice Act and the Annual Session of the Legislative Conference held at Chicago, March 1 and 2, 1910.

NATIONAL LEGISLATION

The energies of your committee have been largely devoted to the promotion of national legislation calculated to protect the health interests of the people. The first bill relating to this subject was presented to the Senate Feb. 1, 1910, by Hon. Robt. L. Owen, Senator for Oklahoma, and was entitled "A Bill Establishing a Department of Public Health and for Other Purposes." It stands on the calendar as S. 6049. The same bill was introduced in the House by Mr. Creager, April 15, 1910, and is on the calendar as H. R. 24549. It provides, as the title implies, for the establishment of a Department with a Secretary of Public Health in the Cabinet and for the transfer of existing public health agencies to such department. These provisions, irrespective of details, comprise the principle involved in the bill, a principle so distinctly in consonance with the traditional attitude of the American Medical Association that your representatives, in conference with others interested in the subject, early in March, did not feel at liberty to consider any alternative measure.

As a matter of fact no alternative measure had at that time been presented to the Congress, although since then, on April 22, 1910, Mr. Simmons introduced a bill (H. R. 24827) "Establishing a Department of Public Health and for Other Purposes," the essential difference between it and the Owen bill being that it does not provide for representation in the Cabinet, but places the proposed Department in charge of a "Commissioner of Public Health." Another measure has been introduced by Mr. Mann, which provides for dropping the words "and Marine Hospital" from the "Public Health and Marine-Hospital Service" but without otherwise modifying the status of the bureau under that name now occupying a subordinate relation in the Treasury Department. Another bill has been introduced to create a "National Bureau of Health."

The Owen bill has been and is under consideration by the Senate Commitee on Public Health and National Quarantine and several hearings have been had on the subject. These hearings have been largely attended by representatives of distinctly lay interests as well as your Committee, all of whom have urged the passage of a measure embodying the principle of the Owen bill. The details of the measure, as desired and expected by its author, are to be elaborated in Committee. In the meantime, the general proposition based on all the bills now before Congress, has been under consideration by the Committee on Interstate and Foreign Commerce of the House.

Whether any bill will be reported out of either Committee at the present session of Congress cannot be determined at the date that this report is written. Your Committee, however, lays before you with satisfaction the fact that the whole proposition is now pending in Congress; that advanced national legislation along public health lines has been urged by President Taft in his measure to Congress; that he stands ready at the proper time to give the movement further support by a special message; that the people are aroused to the importance of the subject as never before in the history of the country; and, finally, that the character of the opposition is such as to impress the people that they must support this movement for their own protection against dangerous and remediable conditions as well as against the rapacity of ignorant, selfish and venal interests.

LEGISLATION IN THE STATES

During the past winter the legislature has been in session in the following states—Georgia, Kentucky, Virginia, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Rhode Island, South Carolina and Louisiana. It is impossible to enumerate all of the bills introduced into the legislatures of the various states but a few of them deserve comment.

MASSACHUSETTS

As is the custom in this state a large number of bills of interest to the medical profession have been introduced to the legislature this year calling for much time and labor in their defense or in opposition. With one exception the results of our labors have been fairly satisfactory. The exception alluded to was the bill giving the courts the common law power, already in force in the Federal courts and in those of some of the states, to charge juries upon the expert medical evidence. The bill was reported favorably by the Joint Judiciary Committee, but was rejected in the House.

Among the numerous bills presented, the following were enacted: The creation of a detention hospital for the temporary reception of persons with mental disturbances, who were formerly sent to police stations, etc.; a state board of registration for nurses. Requiring the use of a prophylactic for ophthalmia neonatorum. Regulating the sale of morphin, cocain, etc. Restriction of the use of public drinking cups. Providing for medical inspection of working children. A commission to investigate the increase or otherwise of criminals, mental defectives, epileptics, etc. A bill permitting cities and towns to maintain sanatoria for the care of tuberculosis patients. (The state now has four large hospitals for the care of these people in all stages of the disease.) A bill establishing small school traveling exhibits of tuberculosis.

The following bills failed of enactment: Optometry, 162 to 58. Anti-vaccination. Privileged communications between physician and patient. Healing by unregistered physicians. Bill requiring "Eddyites," hypnotists, etc., to be registered as physicians are. A bill prohibiting the reappointment of members of the state board of registration in medicine. Bill requiring a diploma before taking examination for license to practice medicine. A bill requiring medical instruction in the public schools was given leave to withdraw. The bill making the state Food and Drug law conform to the Federal law was rejected, as in the opinion of the state board of health, it would lower the standard of our state law. A bill allowing appeals from decisions of boards of health and one placing medical schools under the supervision of the Board of Education were rejected.

KENTUCKY

The following bills became laws: an abortion-bill, making the woman a competent witness against the physician or the person inducing the abortion and relieving her of responsibility in case she testified; a vital statistic bill providing for the registration of births and deaths; an appropriation bill providing $30,000 for the state board of health and $10,000 for a hospital for incurables. The optometry bill and the bill appropriating $150,000 for a medical department of the state university, were defeated.

MARYLAND

A pure food bill and midwifery bill, a lunacy law and sanitary bill were passed by the legislature and signed by the governor. The optometry bill passed both houses but was vetoed by the governor. A bill providing for Pasteur treatment of all persons exposed to hydrophobia passed the legislature but was vetoed. A bill reorganizing the board of health became a law. Anti-vaccination and expert testimony bills failed to pass.

NEW JERSEY

In New Jersey, a new medical practice act, known as the Ramsey bill, providing for a board composed of five regulars, three homeopaths, one eclectic and one osteopath, passed both houses but was vetoed by Governor Fort. An anti-vivisection bill failed to become a law.

NEW YORK

The principal fight in New York was centered around the anti-vivisection bill, a determined effort to pass which was made by the advocates of state restriction of animal experimentation. So far the bill has failed of passage.

OHIO

A large number of bills of interest to the medical profession were introduced of which the following were passed: bill creating the office of state inspector of plumbing; bill restricting the sale of cocain; a criminal abortion bill granting immunity to women and accepting dying declarations; a bill providing for elementary schools for tubercular children. The following bills were introduced but failed to pass: bill authorizing the state board of health to establish a bureau of infectious diseases; bill providing for medical inspection of school children; bill regulating itinerant vending of medicines and nostrums; a medical advertising bill; a Christian Science bill; a bill providing for the sterilization of criminal and defective classes. The legislature passed a bill creating a state board of optometry but it was promptly vetoed by the Governor in one of the strongest presentations of the subject that has yet appeared.

MISSISSIPPI

The following measures, endorsed by the state medical association were introduced into the state legislature: amendment to the medical practice act; a vital statistics bill; midwifery bill and a bill restricting the sale of cocain.

WASHINGTON

A new medical practice act was adopted in this state. An expert testimony bill failed to pass.

VIRGINIA

A bill providing a state board of examiners for chiropractice failed to pass.

LOUISIANA

The Louisiana legislature did not convene until May. The only measure reported so far is a bill for the collection of vital statistics which, it is hoped, will become a law.

BUREAU OF MEDICAL LEGISLATION

The work of the Bureau of Medical Legislation has been continued as outlined in last year's report. There is a decided and gratifying increase in the use being made of this bureau by state boards of health, medical examining boards, officers of state societies and members of the profession in general. In accordance with the instructions of the Committee, the secretary has secured copies of public health laws of the various states. These were collected with a view to the publication of a handbook on medical legislation. Complete copies of all laws have been received from all of the states except Arkansas, Oregon, South Dakota, Idaho, New Mexico and South Carolina. The two latter states are at present preparing the material for the bureau but it has not yet been received. There are at present on file in the bureau over 300 complete laws, referring to various public health matters and covering 43 states. It was found that the publication of the text of the laws complete would involve the preparation of a volume of over 2,000 pages and that the demand for such a book was too limited to justify the expense involved, furthermore, the present crowded condition of the mechanical department of the American Medical Association has made it impossible up to the present to issue such a volume. When the Association has completed its new building it may be possible to issue a volume containing abstracts of these public health laws.

The collection and classification of supreme court decisions regarding medical practice acts has been practically completed. We now have on hand about 200 supreme court decisions, classified and indexed, as well as reference to court reports. But little additional matter is needed to prepare this matter for publication and it will probably be issued in book form as soon as possible. The same work is also being carried on regarding decisions of supreme courts interpreting public health laws.

COMMITTEE FOR THE RELIEF OF MAJOR CARROLL'S WIDOW

At the Washington Conference in 1909, a committee composed of one member from each of the three government services, one member from the District of Columbia and one member at large was appointed to raise by subscription the money necessary to pay off the mortgage on the home purchased by Major James Carroll for his family just previous to his death. This committee consisted of Major M. W. Ireland, chairman, U. S. A., Surgeon W. H. Bell, U. S. N., Surgeon John F. Anderson, U. S. P. H. & M.-H. S., Dr. John D. Thomas, District of Columbia, and Dr. A. S. von Mansfelde of Nebraska. It rendered a partial report at the Atlantic City Session in 1909. At the Chicago Conference on March 2, the committee reported that the entire indebtedness against the property had been wiped out and that the committee now held the property in trust for Mrs. Carroll and that it had in its possession $627.57 over and above all requirements which it was ordered to expend for the benefit of Mrs. Carroll and her family. The total amount raised by the committee, as shown by its final report, was $8,431.55. The committee wishes to call attention to the admirable and expeditious manner in which this money was raised as well as the generous response to requests for contributions. Members of the Association will remember the long delays and difficulties involved in collecting subscriptions for the various memorials which the Association has from time to time undertaken to establish. Most of them have required years of effort. The committee for the relief of Major Carroll's widow not only was able to subscribe and collect the entire amount needed in a very few weeks but actually collected more than was needed and finally found it necessary to publish several requests to the profession to cease sending in contributions.

CONFERENCE ON A MODEL MEDICAL PRACTICE ACT

In accordance with the instructions of the House of Delegates, issued to the Committee at the Atlantic City Session in 1909, a joint conference with the Council on Medical Education was arranged for February 28 to March 2, 1910, in Chicago. The full proceedings of the Conference appear in the *American Medical Association Bulletin* for January, March and May, the January number being held until after the conference in order to include the proceedings. The three days' session was largely attended, as shown by the registration of 167. The proceedings constitute probably the most exhaustive and careful consideration of the question of medical practice ever secured. The discussion held Tuesday morning and evening and the four papers presented at the afternoon session on Tuesday, cover practically every phase of the question. The proceedings show clearly that we have by no means as yet secured unanimity among our own members as to the fundamental principles underlying the regulation of the practice of medicine and that much study and careful discussion will be necessary before uniformity can be secured, even on essential points. By instructions of the conference the work of formulating a model act was assigned to a committee appointed by the chair and consisting of Dr. C. S. Bacon, chairman, Chicago, Dr. S. D. Van Meter, Colorado, Dr. W. H. Sawyer, Michigan, Dr. F. J. Lutz, Missouri, and Dr. A.

R. Craig, Pennsylvania. To this committee was referred all the material on this subject in order that they might draft a bill for submission and further consideration. Dr. S. D. Van Meter of Colorado has submitted a bill as a basis for discussion and criticism, which has not yet been acted on by the committee. We submit it herewith for the consideration and criticism of the House of Delegates.

A BILL FOR AN ACT TO PROTECT THE PUBLIC HEALTH AND REGULATE THE PRACTICE OF MEDICINE

Be it enacted, etc.

Section 1. A board is hereby established to be known by the name and style of the State Board of Medical Examiners. Said board shall be composed of nine practicing physicians of integrity and ability, who shall be residents of, and have been duly licensed to practice medicine in this State, and who shall have been graduated from medical schools of high educational requirements and standing, and who shall have been engaged in the active practice of their profession within this State for a period of at least five years. Said board shall perform such duties, and possess and exercise such powers, relative to the protection of the public health and the control and regulation of the practice of medicine in this State as shall by law be prescribed.

Sec. 2. The Governor shall appoint nine physicians, who shall possess the qualification specified in Section 1 of this act, to constitute the members of said board. Said members shall be so classified by the Governor that the term of office of three shall expire in two, three in four and three in six years from the date of appointment. Biennially thereafter the Governor shall appoint three members, who shall posess the qualifications as specified in section 1 of this act, each to serve for the term of six years; and he shall fill vacancies in the membership of said board for unexpired terms as soon as practicable. Said board shall biennially elect a president, a vice-president and a secretary-treasurer from their membership, and shall adopt a seal, which they shall affix to all licenses issued by them. They shall, from time to time, adopt such rules and regulations as they may deem necessary for the performance of their duties, and a schedule of minimum educational requirements, which shall be without prejudice, partiality or discrimination as to schools of systems of practice of medicine. When an applicant for a license offers to the board satisfactory proof that he has complied with such educational requirements as are specified in said schedule, the board shall accept such proof as sufficient evidence of the educational qualifications of the applicant to entitle him to a license without examination. Said board shall meet in the city of ...., on the first Tuesday of January, April, July and October of each calendar year, and at such other times and places as may be designated by them as necessary for the performance of their duties.

Sec. 3. Said board shall have authority to administer oaths, to summon witnesses and to take testimony in all matters relating to their duties. When the board in the transaction of any of their business, or in the conduct of any hearing, or when any person interested in any such business or hearing, shall desire to secure the presence or testimony of any person before said board, said board, or such person, may procure subpoenas from the clerk of the .... Court of the county wherein such business or hearing is to be transacted or conducted before said board, and the clerk of such court is hereby directed to issue such subpoenas, in the name of the people of the State, commanding the persons whose names shall be given to such clerk by said board, or by such person so interested in such business or hearing, to appear before said board at a certain time and place fixed by said board for the transaction of such business or conduct of such hearing and then and there to testify in the matter of such business or in such hearing. If any person so commanded to appear and testify shall fail or refuse to obey such subpoena, he shall be dealt with by said .... Court in the same manner and to the same effect as though such subpoena had commanded such person to appear and testify in a cause on trial in said court. Fees, or other charges or payments, which may be demanded by any person so commanded to appear and testify shall be only those which may be demanded by witnesses in causes in the .... Court and only under the same circumstances. Such subpoenas shall be served in the same manner as are subpoenas for trials in the .... Court, and they shall be in substantially the same form. Said board shall issue licenses to practice medicine to all persons who shall furnish satisfactory evidence of qualifications to do so under the provisions of this act and the rules and regulations of the board. Such licenses shall be signed by the president and attested by the secretary-treasurer of the board under their seal. It shall be the duty of the secretary-treasurer under the direction of the board personally or by a deputy duly authorized thereunto by said board to aid the several district attorneys of the State in the enforcement of this act and in the prosecution of all persons who have violated any of its provisions.

Sec. 4. No person shall practice medicine in this State unless he shall have made application to said State Board of Medical Examiners, through the secretary-treasurer thereof, upon such form and in such manner as shall be adopted and prescribed by said board, for a license so to do, and shall have obtained from said board and shall possess in full force and virtue a valid license so to do; and any person who shall practice medicine in this State without having made such application and having received and without still possessing such a license shall be deemed to have thereby violated the provisions of this act. All applicants for a license to practice medicine or for a restoration of any such license which have been revoked shall furnish the board with satisfactory evidence of good moral character.

Sec. 5. The manner of determining the qualifications of any person to practice medicine shall be such as shall be adopted by the State Board of Medical Examiners. Examinations of applicants for licenses to practice medicine shall be made by said board according to the methods deemed by them to be the most practicable and expeditious to test an applicant's qualifications. Each applicant shall be designated by a number instead of his name, so that his identity shall not be disclosed to the members of the board, until the examinations shall be graded. The subjects of written, oral or clinical examinations for applicants shall be as follows: Anatomy, physiology, chemistry, symptomatology, toxicology, pathology, surgery and obstetrics; but there shall be no examination on materia medica and therapeutics. An applicant's credentials relating to his general reputation, his preliminary education and the courses of study he has pursued; the degrees he has received; the number of years he has been engaged in the lawful practice of medicine; his experience in hospitals, medical departments of the army, navy and public health and marine-hospital service; licenses granted to him by other states and countries; and his experience as a teacher of medicine, shall be given due consideration by the board in determining his qualifications to practice medicine. When convinced by an investigation of an applicant's credentials that he is qualified to practice medicine the board may grant him a licence thereon without examination.

Sec. 6. Every person who shall receive a license from the State Board of Medical Examiners shall have it recorded immediately in the office of the recorder of deeds of the county in which he shall maintain an office for the practice of medicine, and shall likewise have it recorded in any county in which he shall practice medicine regularly. The recorder of deeds of each county in this State shall keep for public inspection, in a book provided for that purpose, a complete list and description of the licenses recorded by him. When any such license shall be presented to him for record he shall stamp or write upon the back thereof his signed memorandum of the date when such license was presented for record. If the name of any person shall not so appear in such book in any particular county in this State in connection with a description of such license provided for in this act, such fact shall be prima facie evidence in any civil or criminal action involving the practice of medicine by such person in such county that such person does not possess in full force or virtue a license to practice medicine in this State.

Sec. 7. The term practice medicine, as used in this act, is hereby defined to mean holding one's self out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person, with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or the maintenance of an office for the examination or treatment of persons afflicted with disease or injury of body or mind; or attaching the title of M.D., surgeon, doctor, or any word or abbreviation to his name, indicative that he is engaged in the treatment or diagnosis of the diseases or injuries of human beings. If any person shall hold himself out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or shall suggest, recommend or prescribe any form of treatment for the intended palliation, relief or cure of any physical or mental ailment of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or shall maintain an office for the examination or treatment of persons afflicted with disease or injury of body or mind; or shall attach the title of M.D., surgeon, doctor or any word or abbreviation to his name indicative that he is engaged in this state in the treatment or diagnosis of diseases or injuries of human beings, and shall not then possess, in full force and virtue, a valid license to practice medicine without complying with the provisions of this act and in violation hereof. Nothing in this act shall be construed to prohibit gratuitous service in case of emergency, nor a lawfully practicing physician of another state or territory from attending a particular case in this state.

"[nor the practice of religious tenets or religious rites or ceremonies as a form of religious worship or devotion without charge or compensation for the administration thereof."

The foregoing has no just place in a Model Medical Act, but is recommended as the best manner of meeting church opposition. When it becomes necessary insert this clause in Section 7.

"Nor to prohibit commissioned surgeons of the United States Army, Navy or Public Health and Marine-Hospital Service from performing their lawful duties in this state as such."

The foregoing is unnecessary, but it does no harm.

"Nor to prohibit any person from engaging in the administration of massage or similar manual treatment, when not representing himself as a doctor, physician or surgeon."

The foregoing has no just place in a Model Medical Act, but is recommended as the best manner of meeting opposition from the so-called "non-drug" doctors, such as osteopaths, chiropractics, neuropaths, etc. When it becomes necessary insert this clause in Section 7.]

Sec. 8. The State Board of Medical Examiners may refuse to grant, or may revoke, a license to practice medicine in this state, and may cause a licentiate's name to be removed from the record in the office of any recorder of deeds, upon any of the following grounds, to-wit: The employment of fraud or deception in applying for or securing a license, or in passing the examination provided for in this act; the practice of medicine under a false or assumed name, or in personation of another physician of this state or of any state, territory or foreign country, of a like or different name; the conviction of a felony or of a [illegible] al turpitude; habitual intemperance in the us [illegible] otics or stimulants to such an extent as to [illegible] fessional duties; the procuring [illegible] attempting to procure a crimi [illegible] malpractice resulting in the permanent injury or the death of the patient; the obtaining of a fee, either directly or indirectly, either in money or in the form of anything of value, or in the form of a financial profit, either as personal compensation, or as compensation, charge, profit or gain for an employer, or any other person or persons, on the representation that a manifestly incurable, sick, diseased or injured condition of any person can be permanently cured; causing the publication, circulation, exhibition or display publicly of an advertisement, notice or information of any medicine or means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be reestablished, or whereby an abortion can be accomplished; causing the publication, circulation, exhibition or display publicly of any advertisement relative to any disease of the sexual organs, or relative to the treatment, alleviation, palliation, cure or prevention of any disease, weakness or condition of the sexual organs.

Sec. 9. Said board in determining whether any applicant for a license to practice medicine is morally, educationally and otherwise qualified to receive such a license shall upon their own initiative make diligent inquiry and investigation whether such an applicant has at any time done any of the acts constituting any of the foregoing grounds; and they may refuse to grant a license to practice medicine to any person whom after such inquiry and investigation they shall find guilty beyond a reasonable doubt of having done any of such acts. But said board shall not refuse to grant such a license under such circumstances before such applicant has had reasonable opportunity, and at least thirty days' notice, to appear before the board in person and by counsel and present in his behalf such statements, testimony, evidence and argument as he may desire to call to the attention of the board. For the purpose of considering the revocation of any license to practice medicine said board shall have the power upon their own initiative to take notice of the commission by any person holding such a license of any of the acts constituting any of the foregoing grounds, and may make an investigation to determine the probability of the commission of any such act by any such person, and, if they find such probability great, they shall notify such person of such finding, and they shall fix and give thirty days' notice to him of the time and place and the particular grounds when, where and upon which they will conduct a hearing for the presentation of evidence as to whether he has committed any of said acts constituting any of such grounds. At such hearing such person shall be accorded a reasonable opportunity to present to the board in his defense in person and by counsel, such statements, testimony, evidence and argument as he may desire to call to the attention of the board. Any person may file a complaint before the State Board of Medical Examiners against any person who holds a license to practice medicine under the laws of this state, or who is an applicant for such a license, with a view of having the board revoke or refuse to grant such a license, on any of the foregoing grounds. In case any such complaint is filed against any such person, he shall be given a hearing thereon by the board. A copy of such complaint, together with a notice of at least thirty days of the time and place when said board will conduct a hearing thereon, shall be given each person against whom such complaint has been made and he shall be accorded a reasonable opportunity to present to the board in his defense in person and by counsel, such statements, testimony, evidence and argument as he may desire to call to the attention of the board. The State Board of Medical Examiners may at any time after the refusal or revocation of a license as aforesaid, grant or restore, such a license to the person affected. Any person to whom such a license is so restored shall pay to the secretary-treasurer a fee of ten dollars upon the restoration thereof. The action of the State Board of Medical Examiners in refusing to grant or in revoking a license to practice medicine may be reviewed by the .... Court under the common law writ of certiorari.

Sec. 10. Any person who shall practice medicine in this state without complying with the provisions of this act, or any person who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty dollars nor more than three hundred dollars, or by imprisonment in the county jail for not less than ten days nor more than thirty days, or by both, in the discretion of the court. Any person who shall present or attempt to file as his own the diploma or certificate or credentials of another, or who shall give false evidence or present any altered or forged instrument or writing of any kind to the State Board of Medical Examiners, or any member thereof, in connection with an application for a license to practice medicine, or in any hearing before said board, or who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the State Penitentiary for a term of not less than one year, nor more than ten years, at hard labor.

Sec. 11. Each applicant for a license to practice medicine shall pay to the secretary-treasurer of the State Board of Medical Examiners a fee of twenty-five dollars, which shall accompany the application.

Sec. 12. All fees received by the State Board of Medical Examiners and all fines collected by any officer of the law under this act, shall be paid to the secretary-treasurer of said board, who shall, at the end of each and every month, deposit the same with the State Treasurer, and the said State Treasurer shall place said money so received in a special fund to be known as the fund of the State Board of Medical Examiners, and shall pay the same out on warrants drawn by the Auditor of the State therefor, upon vouchers issued and signed by the president and secretary-treasurer of said board. Said moneys so received and placed in said fund may be used by the State Board of Medical Examiners in defraying their expenses in carrying out the provisions of this act. The secretary-treasurer of said board shall keep a true and accurate account of all funds received and all vouchers issued by the board; and on the first day of .... of each year he shall file with the governor of the state a report of all receipts and disbursements for said board for the preceding fiscal year. Members of said board shall receive a per diem for the time during which they shall be actually engaged in the discharge of their duties; and the secretary-treasurer shall receive a salary; said per diem and salary shall be fixed by the board, and, together with other expenses, shall be paid out of said fund of the State Board of Medical Examiners.

COOPERATION IN THE CONFERENCE ON UNIFORM STATE LAWS CALLED BY THE NATIONAL CIVIC FEDERATION

Two members of the National Legislative Committee and the
General Secretary of the American Medical Association repre-
sented the American Medical Association in this conference
which was composed of members of the various state commis-
sions of uniform laws, representatives of most of the important
commercial and civic clubs and other organizations of the coun-
try, including the insurance companies and labor organizations.
Dr. Simmons was made secretary of the committee on resolu-
tion, and succeeded in getting incorporated into the resolutions
which were adopted by the conference, one favoring uniform
state laws on Foods and Drugs, one on Uniform Vital Statistics
and one favoring a uniform medical practice act. The Civic
Federation has since undertaken to establish branches in each of the states as state councils on uniformity in laws and it is hoped that through these agencies the efficiency of the work of the state commissions on uniform state laws will be greatly increased. It is also expected that the cooperation of the Civic Federation and its branches and that of the commissions on uniform laws will help greatly in securing the passage of uniform laws on vital statistics, pure foods and drugs, medical practice and other subjects in which the medical profession is vitally interested.

PROSPECTIVE STATE LEGISLATION

During the winter of 1910-11 the legislatures will meet in thirty-six states. The indications are that there will be a flood of objectionable bills introduced, especially osteopathy, optometry, anti-vivisection, anti-vaccination, Christian Science, drugless healer, etc. Only by the most untiring efforts and ceaseless vigilance can the passage of these pernicious measures be prevented. *The Committee and the Bureau therefore ask for the heartiest cooperation of state associations and* legislative committees as well as the support of all members of the organization *in their efforts to prevent the breaking down* of laws for the protection of the public health in the various states.

BUREAU OF PUBLICITY

The Committee has learned from the experience of past years, both in national and state legislative campaigns, that any effort to secure the *adoption of desirable laws for the* protection of the public health, either in state legislatures or in Congress, must, if successful, be *preceded by a campaign of* publicity and public education *in order that the people and* their representatives in legislative assemblies may understand the necessity of such laws. Education not only of the general public but of the medical profession as well is also a necessary part of any campaign for better conditions. For many years the use of newspapers, magazines and other means of influencing public sentiment has been practically monopolized by commercial interests who had personal and in many cases mercenary *reasons for desiring* the support of the public. The medical profession in past years has been far too negligent in this particular. In order to accomplish anything of permanent value we *must have* the support *and cooperation of public* sentiment. This can only be secured through public enlightenment of our aims and motives. Public education must necessarily precede legislation and the only rational plan is for such instruction to be in the hands of the same body as that charged with the oversight of legislative matters. Both for financial reasons and because the committee did not desire to conflict with any other committees or boards of the Association, the organization of a Department of Publicity has been deferred although the necessity for it has been apparent. The Committee, therefore, strongly urges that it be authorized to establish a *press bureau for the* education of public opinion both *on* general health topics and as a precedent measure for any legislative campaign. The time has passed when any fears as to the danger of such a course being regarded as undignified and unprofessional should deter us. If the American public is not informed and enlightened by the reputable medical profession it will be biased and influenced by the quack, the charlatan, the manufacturer of impure and adulterated foods and drugs *and by all the other selfish interests which have* so long preyed on the people.

Respectfully submitted,

Charles A. L. Reed, Chairman,
Charles S. Bacon,
George W. Gay,
Frederick R. Green, Secretary.

DR. REED TENDERS RESIGNATION

To the President and House of Delegates:—I beg leave herewith to present my resignation as a member of the Committee on Medical Legislation, to become effective on the selection of my successor at the present session of the Association.

In taking this step at this time I deem it important to
explain that I tendered my resignation to the President in
October of last year, but that I subsequently withdrew the
same on the representation that it was impracticable to fill the
vacancy, *ad interim*, and I knew that the pressure of duties on
the Committee made it of the highest importance that it should
be in working condition during the legislative and congres-
sional period embraced by the last eight months. Now, how-
ever, that that period has practically passed, or at least will
conclude with the adjournment of the Congress within a few
weeks, and in view of the fact that the House of Delegates now
in session can fill the vacancy thus created, I renew my resig-
nation for the reasons that actuated me in the first instance.

EXPANSION OF LEGISLATIVE ORGANIZATION

I desire that these reasons shall be distinctly understood. In the first place I have been honored with this position for the last eight years, which I look upon as a longer period than should be occupied by any one man in the chairmanship of any one committee in an organization of this representative character. In the next place, in view of the imperative demands of my practice, the tax in point of time, money and energy thus imposed is more than should be expected of any one person for so long a time. And, finally, the responsibilities in behalf of all the people, responsibilities that naturally rest on this Association, responsibilities that it cannot and ought not evade, but responsibilities that must be discharged through your legi [illegible] make it imperative that that legislative [illegible] retaining its present essential features, must be placed upon a different basis. I urge this view in full recognition of the high efficiency that has been displayed by your National Legislative Council and by the National Auxiliary Legislative Committee, the continuance of both of which, in their present forms, I urge as vital to the perpetuity of our influence in determining affairs in this country. The central Legislative Committee ought, however, to be brought into association and correlation with every other committee of whatever character, the object of which is to disseminate knowledge for the safe guidance of the people. This can only be done by a strong cohesive organization in which there must be the largest liberty of individual opinion but in which the wisdom of the majority shall control and from which mere obstructionists must be eliminated with as little ceremony as may be compatible with good manners and established forms.

The whole legislative and educational organization must furthermore be given status as a Council which, in this Association has come to imply the maximum of dignity and force. But even if all these changes were made, this propaganda in behalf of the people must still fall short of a full measure of success unless it is organized on what, for a better designation, must be called business principles. By this I mean that the Bureau of Legislation at Chicago, efficient as it is, must be strengthened and its scope widened. The Chairmanship of the Council of Legislation must command all the time of a capable member who should be adequately paid for his labors. The time has passed when any organization, however altruistic its purposes, can throw the whole burden of its duties on a single person and expect to pay the obligation by the honor thus conferred. Then let every person take his turn and do his duty in a designated place but refrain from participation in sporadic movements for personal conspicuity to be attained by the usurpation of functions already provided for in the more broadly organized propaganda.

COOPERATION IN STATE LEGISLATION

And now that I have said this much I feel that, in justice to the House of Delegates, to my successors, and to myself, I cannot permit my resignation to go forward without mentioning certain other impressions that have been forced on me by my eight years' experience but, which, being personal to myself, may not with propriety be embraced in the formal report of the Committee. These impressions relate to legislative work in, respectively, the states and the Nation. With respect to the states, I may observe that the measures pending before the various legislatures have been kept under the cognizance only through the instrumentality of the Bureau of Legislation. This ought to be kept up and the Bureau ought to be in position, wherever occasion requires, to furnish state legislative committees with literature for their information and guidance. It is, however, to my mind extremely doubtful whether the National organization should ever take a hand in either the promotion or defeat of proposed legislation in any of the states, even when state committees, from a probably mistaken sense of weakness, should request such cooperation.

For any member of the National organization, not a resident of a given state, to appear before the legislature of that state either for or against a given measure, would, under ordinary circumstances, tend to prejudice the cause at issue before the legislators.

UNIFORMITY, LICENSURE AND RECIPROCITY

Model acts or standard forms of legislation for the promotion of the general welfare, but coming under the purview of the police powers of the respective states may, however, be formulated with propriety by a central organization and sent to the different state organizations for presentation to their respective legislatures. In this connection, however, it is to be remembered that the variations in the constitutions of different states necessitate corresponding variations in the statutes enacted in pursuance and by authority of such constitutions. This fact of itself must defeat the absolute uniformity of state legislation along certain lines however much the principles of such legislation may be in unison.

The principle of uniformity in state legislation governing the practice of medicine has been urged with respect to reciprocity in state licensure. At present no two states have identical laws, yet reciprocity in licensure obtains to some extent between a majority of states. From this it would seem that absolute uniformity of statutes is not essential to the object in view. Most states extend reciprocity only to those who have procured license by examination and decline to extend the same privilege to members of the profession, whether graduates or not—whether lowly or honored, humble or distinguished—who obtained license by registration at the time the respective acts went into effect. Every state that maintains this restriction perpetrates not only an injustice but an insult not only to the majority of the reputable physicians within its own borders, but to those within the borders of every other state in the Union. The pretention that the so-called "legal practitioners"—those to whom license was given on years-of-practice qualification—are any less qualified intellectually or morally, in any one state than in another, or that they are any more disposed to migrate to or from one state than to or from some other state, would probably be exploded in the light of the real facts were they once authoritatively ascertained. That there is any essential inequality between the qualifications of the examiners themselves when selected by political methods in the different states is, likewise, probably far from the facts. That these selections are generally, but not always made on a political basis, is a matter of common knowledge. "Who shall examine the examiners?" has therefore come to be something more than a derisive pleasantry. It is indeed probably true that the majority of state examiners selected by these political methods and vested with the duty of judging the work of our ablest universities, could not to-day pass the matriculation examination, let alone the examination for licensure prescribed by themselves and by their respective boards.

The proscriptive clause in many of the state laws, or in the regulations passed in pursuance of such laws, whereby medical teachers are excluded from membership in examining boards, not only deprives these bodies of the ability represented by the leaders of the profession in their respective states, but is an obvious invasion of personal rights that would not stand the test if carried to the courts. But these conditions are so nearly uniform in the respective states that they to-day, under the comity of states and with but slight adjustment of differences, demand the very general adoption of a policy of wide open reciprocity. At any rate these and other matters demand most careful consideration before anything like a standard act is promulgated under the auspices and with the approval of the American Medical Association.

EXISTING STATE MEDICAL LAWS AND THE PROPAGATION OF CULTS

One of the other matters to which I invoke your attention is the fact, as I see it and believe it to exist, that existing state medical laws are directly responsible for the propagation of sectarianism in medicine and that they have failed properly to protect the people against ignorant, unscrupulous, rapacious and otherwise dangerous cults. This conclusion, forced on me by several years' study of legislative, professional and social tendencies, is to-day confirmed by conditions as they actually exist, with only a few honorable exceptions, in every state in the Union. These conditions call for very careful study of cause and effect—too comprehensive to be treated in detail at this time—but I feel that I may take opportunity only to say that these laws, while originally seeking to do away with sectarianism based on half knowledge or no knowledge, did so by legitimatizing the better educated sects in existence at the time the laws were passed. But the sects were recognizd either by separate boards, or in the personnel of so-called mixed boards, the latter arrangement being effected in some instances by agreement with the appointing power. In each instance "systems" or "methods of cure" were recognized in some way in the preliminary registrations or by special questions on therapeutics in the later examinations for licensure.

Now if these sects were recognized why should not other sects be recognized? And if these particular sects may prescribe the knowledge, both general and special, by which they shall become legitimatized, why may not other sects prescribe the knowledge, both general and special, by which they in turn shall be legitimatized? The error was in the beginning when there was, as there is now, practical agreement between these better educated sects on what shall comprise the general fundamental knowledge that ought to be possessed by everybody who professionally assumes the care of disease or injury. But this was at a time when the special knowledge that characterized such other educated sects was more insisted on than it is to-day. In other words each such sect then went just as far as the others would let it in getting its peculiar pills and potions into the statute books. Varnish it as you may, that was the fact then, and it remains a fact to-day.

But a law differs from a statute in that the law is a regulation and only such regulation of society as the people will support. It is important to bear this distinction in mind because, whatever my be the provisions of the statutes, the people never have, never will, and, in my opinion, never ought to give the force of law to any statute that, even inferentially or constructively, seeks to give monopoly of cure to either men, methods, cults or systems. I am convinced that, whatever may be placed in the statutes, the most that the law will ever do will be to prescribe and enforce a common, safe and rational foundation for all persons or plans of cure—all cults, systems or denominations of medicine—that have for their object the professional care and conduct of disease or injury of the human family.

This foundation must consist of a knowledge not only of the fundamental studies for everybody, but of human anatomy, physiology, bacteriology, pathology, diagnosis, hygiene, sanitation, obstetrics and surgery, and such allied branches as may be essential to a comprehension of these complex topics. The always more or less speculative question of remedies and cure in their broadest sense ought to be and must be left to the intelligence of one thus otherwise equipped. All cults standing on such a foundation may be considered safe. The attempt to do more will defeat the object in view as that object is to-day being defeated. The attempt to do less will be to fail to give society the protection to which it is entitled. To defer the adoption of this rational basis for our medical legislation will be to await development and multiplication of ignorant cults and isms until by their strength and establishment the necessary reform will be rendered either difficult of accomplishment or impossible. These, too, are considerations to be taken into account before a model practice act is promulgated in the name of the American Medical Association.

THE GUARDIANSHIP OF VICTORY

A victory is not worth gaining unless its fruits are safeguarded against reprisals. This is as true in the matter of progressive medical legislation as it is in warfare between nations. It is, for example, hardly worth while to work seventeen years for a food and drugs act if its power to protect the people is destroyed by executive interpretation in the short space of seventeen months. It is not worth the time and money to establish a national quarantine if by virtue of its uninfluential status it can be browbeaten into ineffectiveness by rapacious commercial interests at infected ports. It is not worth while to create laboratories for hygienic investigation if we are to permit them to ignore the investigation of unknown causes underlying diseases that threaten to decimate the people. We must stand by every vantage point gained in this great movement for the promotion of the general welfare. This can be done only by still further perfecting our already splendid organization and by still further and persistently disseminating its influence throughout society.

To-day, in the movement for a National Department of Health, the isssue is fairly joined between the enlightened element of society under the leadership of the medical profession on the one hand and the ignorant and credulous element of society under the leadership of sinister cults on the other hand. The side will win whose cause best subserves the welfare of the people and that makes the people understand that fact. By this criterion alone shall the contestants be measured and weighed in the final arbitrament. And let it be remembered that this final arbitrament must come at the hands of the plain people whose interests are always first to be considered and without whose support all movements must stop short of progress. This being true, it devolves on every person conversant with the merits of this great movement for the conservation of public health, and on which is predicted our public wealth, to recognize in this question the paramount political issue of the present and succeeding campaign.

THE IMPORTANCE OF POLITICAL ACTION

An issue becomes an issue when it acquires a vote-determining power and not until then. The sooner this particular question thus becomes an issue to be discussed on the hustings and determined at the polls the better for the American people. I am utterly opposed to those who protest against permitting this question to go into politics. The sooner and further we put it into politics and the harder we drive it home with effective organization and courageous leadership the sooner will the voice of science and humanity become effective in the promotion of the general welfare. In that campaign I hope always to be found at my place in the ranks.

I desire to thank the House of Delegates and the members of the American Medical Association for their prolonged manifestations of favor and confidence.

Very respectfully, Charles A. L. Reed.

Cincinnati, Ohio, May 20, 1910.

Dr. Everett J. McKnight, Connecticut, called attention to the omission from the report of the Committee on Medical Legislation of what had been accomplished in Connecticut, although he had sent a report of this work to the Assistant Secretary.

It was moved and seconded that the report of Dr. McKnight be included as a part of the report of the Committee on Medical Legislation.

The motion was carried.

The report was then referred to the Reference Committee on Legislation and Political Action.

The President: We will now hear the report of the Council on Medical Education, Dr. Arthur D. Bevan, Illinois, Chairman.

Dr. Bevan then read the report, which was referred to the Reference Committee on Medical Education.

Report of the Council on Medical Education

To the Members of the House of Delegates of the American Medical Association:

During the past year the second tour of inspection of the medical colleges of the United States has been completed and much additional data collected. From the fact that the medical colleges of Canada furnish so many medical practitioners to the various states and requests for reliable information regarding them has been lacking, these colleges were included in the second tour of inspection so that now the Council has first hand information regarding all the medical schools of the United States and Canada. Since the completion of the actual inspection work the reports regarding the various colleges have been carefully reviewed and compared department by department with a view of finding the average condition. Incidentally, a mass of other data received from reliable sources was found to corroborate the data obtained by the inspections. From this careful study of the conditions actually existing and with a view of the immediate needs of medical education, the following outline of the "Essentials of an Acceptable Medical College" was prepared. Omitting from consideration a number of the utterly worthless medical colleges this outline represents in the majority of points a line considerably below the average of conditions existing in all the colleges of the United States and Canada. The outline is as follows:

1. Strict enforcement of all standards and requirements, the college itself to be held responsible for any instances where they are not enforced.
2. A requirement for admission of at least a four-year high-school education superimposed on eight years of grammar school work, or the actual equivalent education, this to consist of 14 units as defined by the College Entrance Examining Board and required by the Carnegie Foundation for the Advancement of Teaching.
3. As soon as conditions warrant, the minimum requirement for admission should be enlarged to include at least one year's college work each in physics, chemistry and biology and a reading knowledge of at least one modern language, preferably German or French.
4. A requirement that students be in actual attendance in the college within the first week of each annual session and thereafter.
5. That actual attendance at classes be insisted on except for good cause, such as for sickness, and that no credit be given under any circumstances for less than 80 per cent. of attendance on each course.
6. That advanced standing be granted only to students of other acceptable colleges and that in granting advanced standing there shall be no discrimination against the college's full-course students.
7. Careful and intelligent supervision of the entire school by a dean or other executive officer who holds, and has sufficient authority to carry out, fair ideals of medical education as interpreted by modern demands.
8. A good system of records showing conveniently the credentials, attendance, grades and accounts of the students.
9. A fully graded course covering four years of at least 30 weeks each, exclusive of holidays, and at least 30 hours per

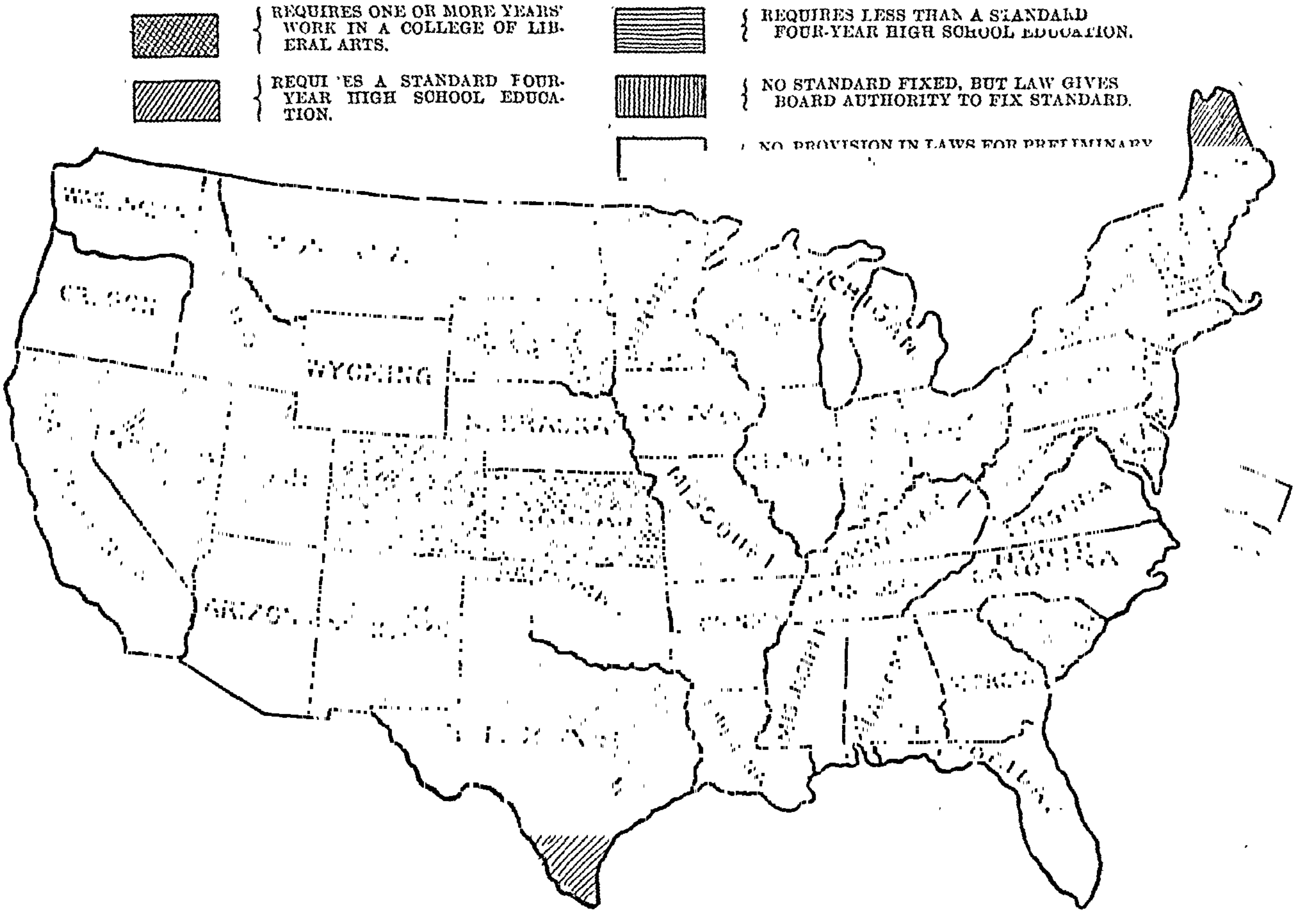
week of actual work; this course should be clearly set forth in a carefully prepared and printed schedule of lectures and classes.

10. Two years of work consisting largely of laboratory work in thoroughly equipped laboratories in anatomy, histology, embryology, physiology, chemistry (inorganic, organic and physiologic), bacteriology, pathology, pharmacology, therapeutics and clinical diagnosis.

11. Two years of clinical work largely in hospitals and dispensaries, with thorough courses in internal medicine (including physical diagnosis, pediatrics, nervous and mental diseases), surgery (including surgical anatomy and operative surgery on the cadaver), obstetrics, gynecology, laryngology, rhinology, ophthalmology, otology, dermatology, hygiene and medical jurisprudence.

12. At least six expert, thoroughly trained instructors in the laboratory branches, salaried so they may devote their entire time to instruction and to that research without which they cannot well keep up with the rapid progress being made in their subjects. These instructors should rank sufficiently high to have some voice in the conduct of the college. There should also be a sufficient number of assistants in each department to look after the less important details.

CHART 1.—STATE BOARD REQUIREMENTS OF PRELIMINARY EDUCATION


REQUIRES ONE OR MORE YEARS' WORK IN A COLLEGE OF LIBERAL ARTS.
REQUIRES A STANDARD FOUR-YEAR HIGH SCHOOL EDUCATION.
REQUIRES LESS THAN A STANDARD FOUR-YEAR HIGH SCHOOL EDUCATION.
NO STANDARD FIXED, BUT LAW GIVES BOARD AUTHORITY TO FIX STANDARD.
NO PROVISION IN LAWS FOR PRELIMINARY
OREGON
WYOMING
NEBRASKA
MISSOURI
ARIZONA
VIRGINIA
CAROLINA

13. The medical teaching should be of at least the same degree of excellence as obtains in our recognized liberal arts colleges and technical schools.

14. The members of the faculty, with a few allowable exceptions, should be graduates of institutions recognized as medical colleges and should have had a training in all departments of medicine. They should be appointed because of their ability as teachers and not because they happen to be on the attending staff of some hospital or for other like reasons.

15. The college should own or entirely control a hospital in order that students may come into close and extended contact with patients under the supervision of the attending staff. The hospital should have a sufficiently large number of patients to permit the student to see and study the common varieties of surgical and medical cases as well as a fair number in each of the so-called specialties.

16. The college should have easily accessible hospital facilities of not less than 200 patients which can be utilized for clinical teaching (for senior classes of 100 students or less), these patients to represent in fair proportion all departments of medicine.

17. The college should have additional hospital facilities for children's diseases, contagious diseases and nervous and mental diseases.

18. Facilities for at least five maternity cases for each senior student, who should have actual charge of these cases under the supervision of the attending physician.

19. Facilities for at least 30 autopsies during each college session (for senior classes of 100 students or less).

20. A dispensary, or out-patient department, under the control of the college, the attendance to be a daily average of 60 cases (for senior classes of 100 students or less), the patients to be carefully classified, good histories and records of the patients to be kept and the material to be well used.

21. The college should have a working medical library to include the more modern text and reference books and 10 or more leading medical periodicals; the library room to be easily accessible to students during all or the greater part of the day; to have suitable tables and chairs and to have an attendant in charge.

22. A working medical museum having its various anatomic, embryologic, pathologic and other specimens carefully prepared, labeled and indexed so that any specimen may be easily found and employed for teaching purposes.

23. A supply of such useful auxiliary apparatus as a stereopticon, a reflectoscope, carefully prepared charts, embryologic or other models, manikins, dummies for use in bandaging, a Roentgen ray or other apparatus now so generally used in medical teaching.

24. The college should show evidences of reasonably modern methods in all departments and evidences that the equipment and facilities are being intelligently used in the training of medical students.

25. A statement in which the college's requirements for admission, tuition, time of attendance on the classes, sessions and graduation are clearly set forth should be given, together with complete lists of its matriculants and latest graduating class in regular annual catalogues or announcements.

DEFINITIONS OF A MEDICAL COLLEGE* AND A MEDICAL SCHOOL†

"An institution to be ranked as a medical college must have at least six (6) professors giving their entire time to medical work, a graded course of four full years of college grade in medicine, and must require for admission not less than the usual four years of academic or high-school preparation, or its equivalent, in addition to the preacademic or grammar school studies."

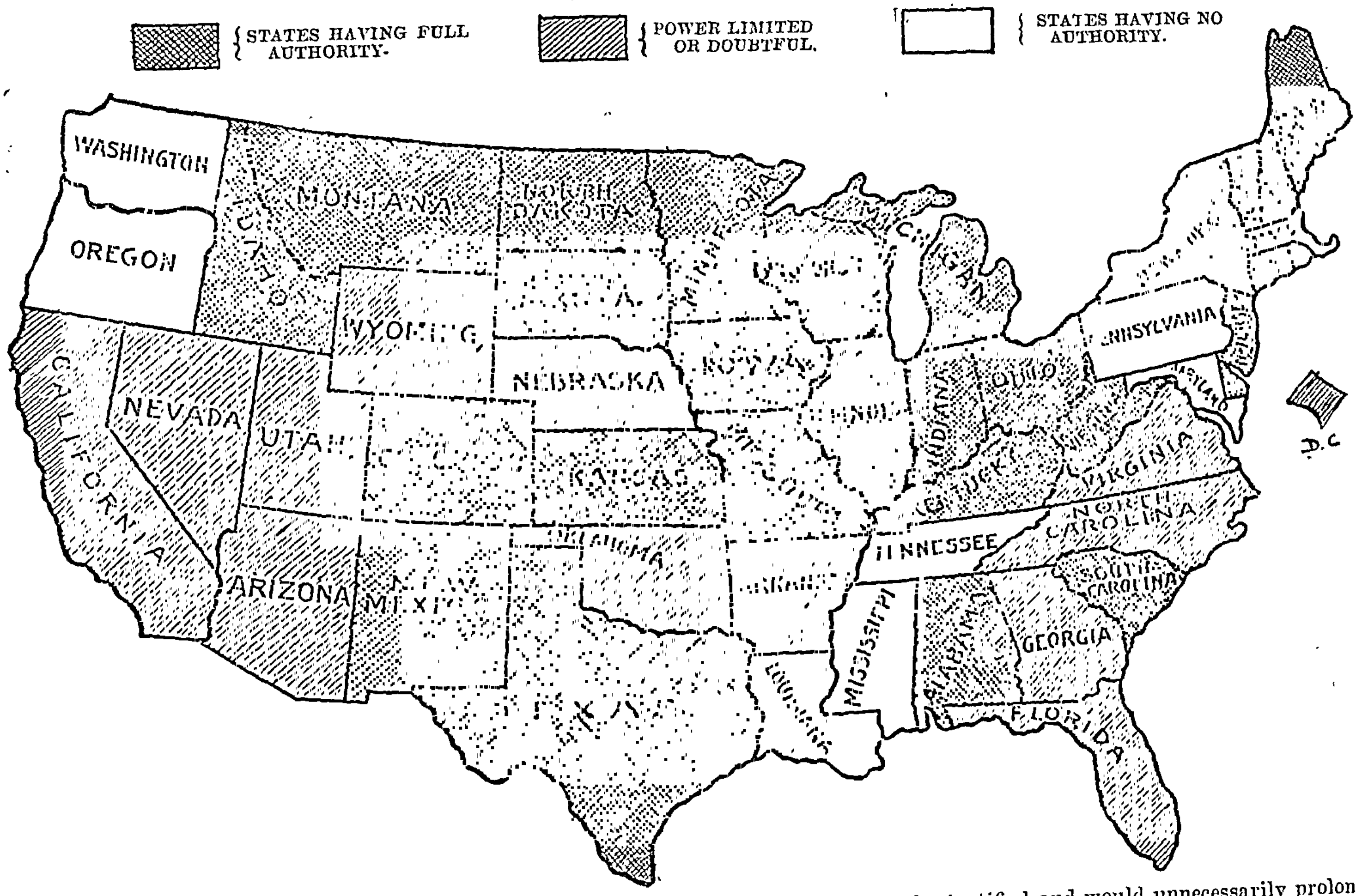
By a medical school as differentiated from a medical college is meant a part of a university requiring for admission the equivalent of two years of collegiate work and which offers instruction of not less than two years' duration, leading to the degree of Doctor of Medicine.

Taking the above outline as a standard, although, as already stated, it represents in most particulars a very low average of the conditions actually existing, the colleges were rated on a civil service basis on the scale of 100. The data relating to each college were grouped under ten general heads in such manner that the groups would have as nearly equal weight as possible, each group allowing a possible 100 points (10 per cent.) and the ten groups aggregating, therefore, a possible 1,000 points (100 per cent.). The ten heads under which the data were arranged are as follows:

1. Showing of graduates before state boards.
2. Requirements and enforcement of satisfactory preliminary education and the granting of advanced standing.
3. Character of curriculum.
4. Medical school buildings.
5. Laboratory facilities and instruction.
6. Dispensary facilities and instruction.
7. Hospital facilities and instruction.
8. Faculty, number of trained teachers, all time instructors, especially of the laboratory branches and extent of research work.
9. Extent to which the school is conducted for properly teaching the science of medicine rather than for the profit of the faculty directly or indirectly.
10. Libraries, museums, charts, etc.

Those colleges receiving a rating of 70 per cent. or above are listed in Class A, those receiving a rating of from 50 to 70 per cent. in Class B, and those rated below 50 per cent. in Class C. Class A colleges may be considered, therefore, as acceptable colleges, those of Class B as colleges which require certain definite improvements to make them acceptable and those of Class C as colleges in which complete reorganization would be required to make them acceptable.

CHART 2.—STATE BOARDS HAVING AUTHORITY TO DETERMINE THE REPUTABILITY OF MEDICAL COLLEGES



Following the first tour of inspection, the Council was criticized in certain quarters for not publishing outright its classification of medical colleges. That classification was not published, however, because the Council desired to give a number of colleges which were contemplating improvements the opportunity to make good. The delay has been more than justified. Many colleges have secured additional facilities, numerous mergers have been brought about and, on the whole, the situation has greatly improved. The general conditions as revealed by the first inspection, however, were given the widest possible publicity so that at the present time any plea of ignorance of the demands of modern medicine is unworthy of consideration and further delay in the presentation of a classified list would not be justified and would unnecessarily prolong the existence of low standards.

With the knowledge that only about half of our medical schools are teaching medicine in an acceptable way and with the power possessed by the majority of the state boards to determine what constitutes a medical school in good standing, it would seem easily possible for the state boards, acting either independently or conjointly, to bring about a rapid improvement.

The teaching of modern medicine is an important function. The turning out of ignorant and ill-qualified physicians is too great a menace to the community to be permitted. The only legal barrier which can protect the public from such incompetent practitioners is the state medical licensing board. There are, however, many factors which are causing confusion in standards and a serious division of responsibility. Medical licensing boards often have to contend with the inconsistency of legislatures, which, after adopting strong medical practice acts providing for fair educational standards, proceed to seriously limit the board's power by granting special legislation for various medical sects with educational standards invariably lower than those required of medical practitioners. Such special legislation has caused much confusion in standards, is unfair to medical practitioners and is a wrong to the sick and afflicted who have reason to expect that only thoroughly qualified men will have the legal right to call themselves "doctors" or "physicians."

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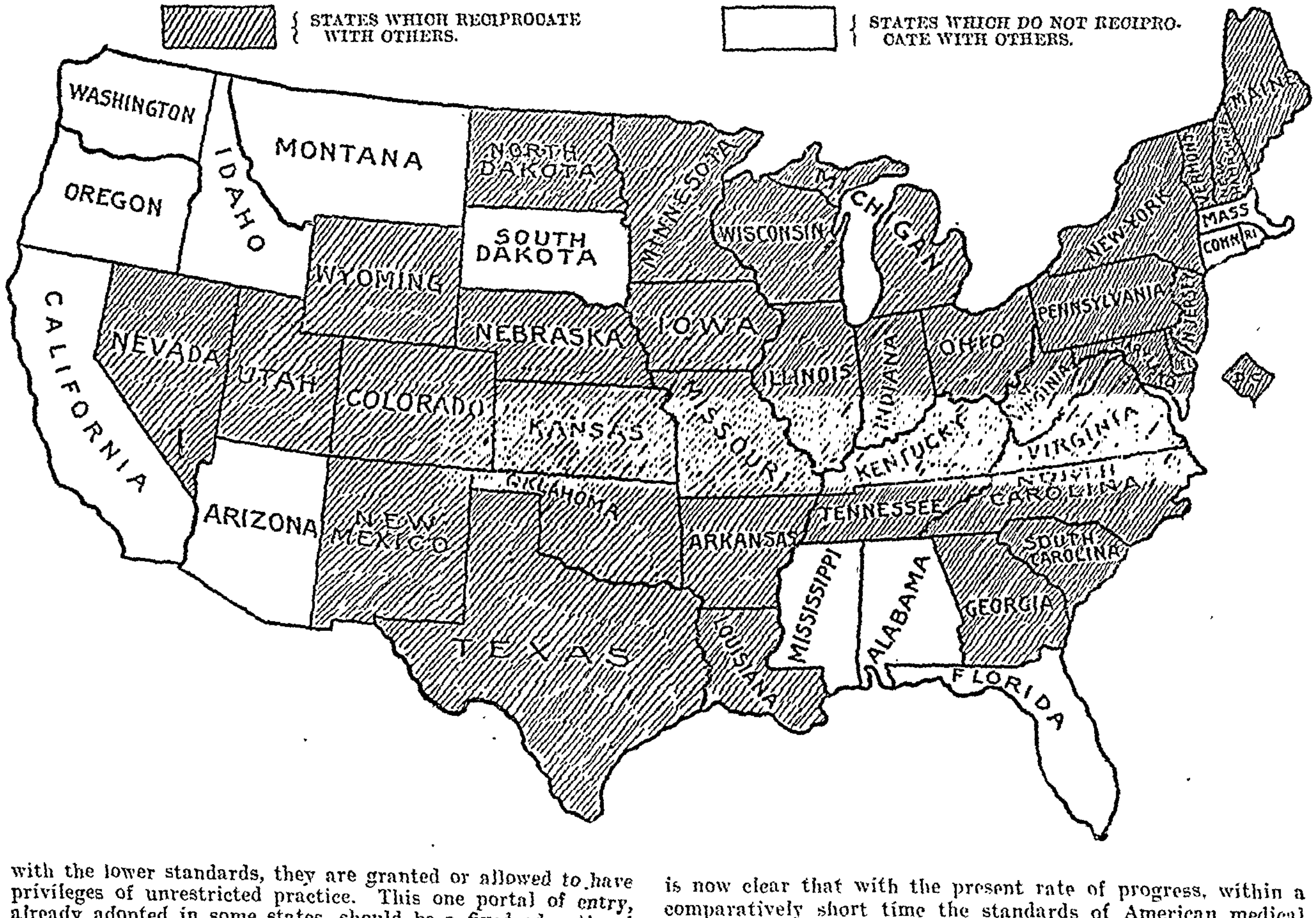
* This definition of a college is based on that given in the revised ordinances of the State of New York, and which also was adopted by the Carnegie Foundation for the Advancement of Teaching as their standard.

† Based on the definition of the term "school," adopted in 1909 by the Association of American Universities.

It is of extreme importance, therefore, that each state should have a single licensing board, that its members should be selected because of their special fitness for the work involved, and that this board should be given full authority in the premises. Instead of that we now have in our 49 states and territories 82 different boards of medical examiners including the sectarian boards. In some states the responsibility for defending the public against ignorance, incompetence and fraud, is divided among as many as four separate boards.

It is also of great importance that in each state there should be but one portal of entry to the practice of medicine. Instead of that we have in some states one portal for those with ample qualifications but special gateways by which ignorant and incompetent practitioners, professing to adhere to special methods of treatment, can also get in. In the majority of states after the representatives of these cults are licensed, even with the lower standards, they are granted or allowed *to have* privileges of unrestricted practice. This one portal of entry, already adopted in some states, should be a fixed educational standard to which all schools professing to train medical practitioners should have to comply. Graduation from a medical college holding to that standard should be required as well as the state license examination. The certificate of graduation would be *a guarantee* from a reputable medical college that the applicant has had a thorough training, since that college granted him a diploma. The license examination would furnish an added guarantee that the applicant has a knowledge of the fundamental medical sciences and the ability to recognize diseases. In testing the candidate's ability to this extent there should be no division of responsibility, no special standards, or other makeshifts. When it comes to testing the applicant's system of treatment there are numerous methods which would be effective and at the same time be fair to the applicant. For example, some boards have the authority to call in a regularly licensed practitioner of any particular school of medicine to examine in materia medica or in the applicant's special method of treatment.

CHART 3.—INTERSTATE RECIPROCITY IN MEDICAL LICENSURE



State licensing boards are fighting the people's battle against ignorance and incompetence, sometimes without the support either of the public or of the medical profession and they are often seriously handicapped. The charts herewith presented will give some idea of the conditions existing in the various states against which the licensing boards have to contend and show how necessary it is that the boards receive the undivided support of the medical profession and of the public in the important and difficult work they have to do. That some states have not already been overrun with incompetents is due entirely to the fact that examining boards have found methods by which the unfit could be excluded even with the limited authority parcelled out to them by their legislatures. The time has come, however, when the medical profession and the people of each state should see to it that a single board of competent medical examiners shall control the licensing of all practitioners of medicine and that this board be given full authority. This one barrier between the sick and afflicted and the crowds of ill-trained, incompetent practitioners should be made effective.

Very rapid and very great improvements have been made in medical education in this country in the last few years and it is now clear that with the present rate of progress, within a comparatively short time the standards of American medical education and of the American medical schools will compare favorably with those of any country in the world.

The Council believes that the coming *American standard* will be: A four-year high-school education; a year or two in the university laboratories of chemistry, physics and biology; *four* years in the medical school and a clinical year as an intern in a hospital.

About two-thirds of the acceptable schools of the country have either already put into force the requirement of college physics, chemistry and biology or will put this requirement into force this fall. This requirement, as you all know, is the one adopted by Germany, Great Britain, France and all of the advanced countries of the world. Medical educators agree that a thorough training in these branches is *practically necessary* to the student beginning the study of modern medicine.

The adoption of this requirement in some parts of the South may be somewhat delayed owing to the backward state of general education. North of the Ohio River, however, and west of the Mississippi it has already been adopted by almost all of the better schools. The members of the Council are unanimous in the belief that a degree requirement for admission to the study of medicine is too extreme to be considered in the drawing up of an American standard of medical education.

The second great advance—the addition of a clinical year—as an intern in a hospital after the completion of the work in the medical school is quite as important and in some ways more important than the requirement of the preliminary sciences for admission. This clinical year, however, is largely taking care of itself, as the modern medical student soon learns that a hospital appointment is an essential part of his medical training and makes every effort to secure it. The time will soon arrive, however, when this clinical year will be recognized as a part of the required medical course, and the whole medical curriculum will be arranged and planned with this hospital year in view.

Sixteen medical schools are now requiring as a minimum for entrance two or more years of work in a college of liberal arts in addition to a four year high school education. These colleges and the years when the requirement became effective are as follows:

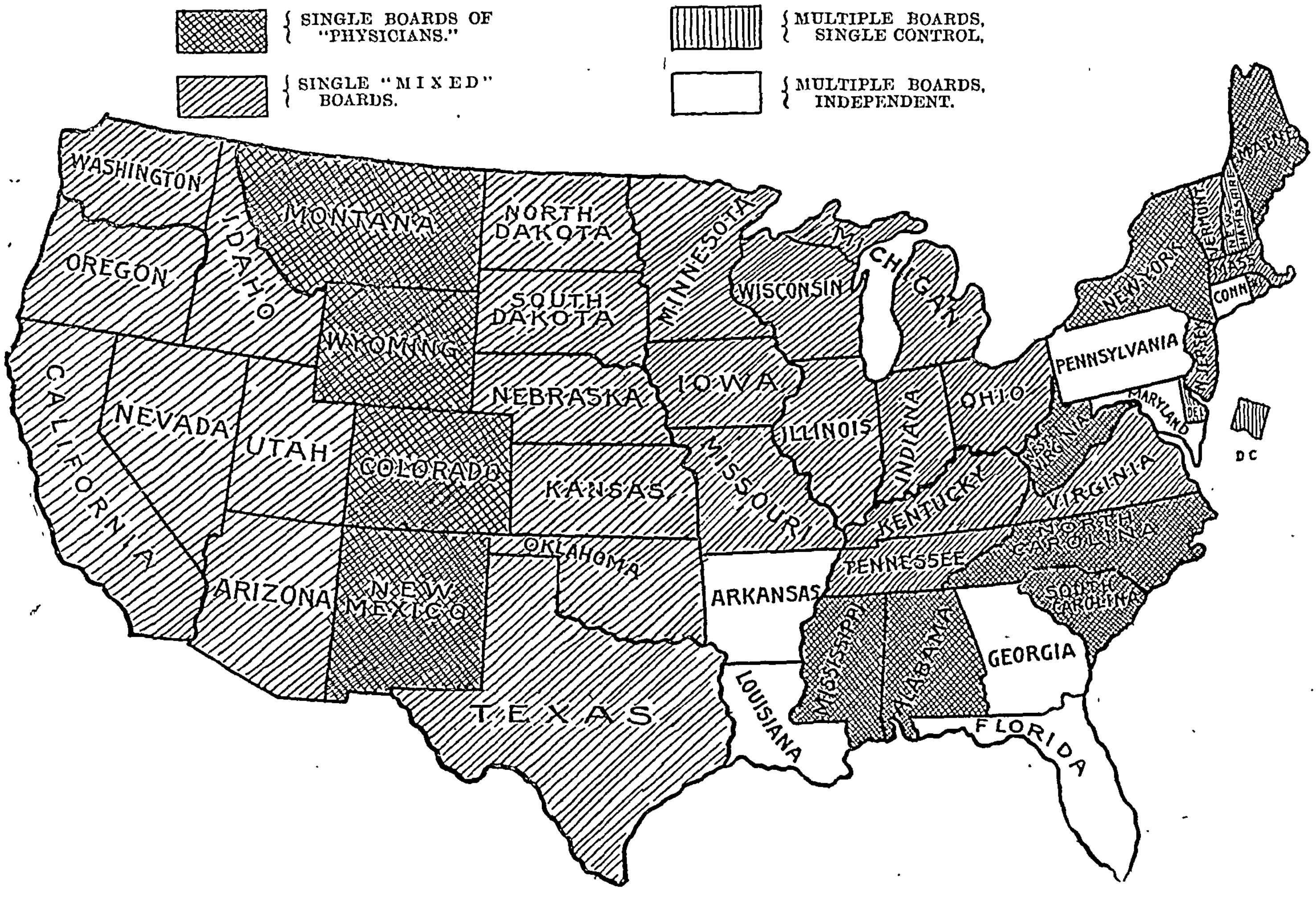
College.	Begins.
Johns Hopkins University Medical Department	1893
Harvard Medical School	1900
Western Reserve University Medical Department	1901
University of Chicago, Rush Medical College	1904
University of California, Medical Department	1905
University of Minnesota, College of Medicine and Surgery	1907
University of North Dakota, College of Medicine	1907
University of Wisconsin, College of Medicine	1907
Cornell University Medical College	1908
Wake Forest College, School of Medicine	1908
Leland Stanford Junior University, Department of Medicine	1909
Yale Medical School	1909
University of Kansas, School of Medicine	1909
University of Michigan, College of Medicine	1909
University of Nebraska, College of Medicine	1909
University of South Dakota, College of Medicine	

Ten other colleges in their printed announcements have clearly stated their intention to require two years of liberal arts' college work as their minimum standard of preliminary education for the session of 1910-11 and thereafter. These colleges are as follows:

College.	Begins.
University of Colorado, School of Medicine	1910
Indiana University School of Medicine*	1910
State University of Iowa, College of Medicine*	1910
Drake University College of Medicine‡	1910
University of Missouri, Department of Medicine†	1910
Dartmouth Medical School	1910
Columbia University College of Physicians and Surgeons	1910
Syracuse University College of Medicine*	1910
University of Pennsylvania, Medical Department*	1910
University of Utah, Medical Department*	1910

* One year required for the session of 1909-10.
† One year has been required since 1906.
‡ The printed announcement for 1909-10 contains no mention of the advance in entrance requirements but an official letter states that two years of collegiate work will be required for admission beginning September, 1910.

CHART 4.—CHARACTER OF THE STATE LICENSING BOARDS



The twenty-one following colleges either already require in addition to a four-year high school course one year of work in a college of liberal arts, including courses in physics, chemistry and biology, or have made definite statements in their printed announcements or otherwise, that they will require that standard of preliminary education in and after the year given:

College.	In Force.
Northwestern University Medical School	1908
Fordham University School of Medicine	1908
Hahnemann Medical College of the Pacific	1910
Denver and Gross College of Medicine	1910
Howard University School of Medicine	1910
Kansas Medical College	1910
Tulane University, Medical Department	1910
St. Louis University, School of Medicine	1910
University Medical College, Kansas City	1910
Washington University Medical Department	1910
Ohio-Miami Medical College, University of Cincinnati	1910
College of Physicians and Surgeons, Cleveland	1910
University of Oregon, Medical Department	1910
University of Texas, Medical Department	1910
University of Virginia, Department of Medicine	1910
West Virginia University, College of Medicine	1910
Marquette University, Medical Department	1910
Wisconsin College of Physicians and Surgeons	1912
Medical School of Maine	1912
Boston University, School of Medicine	1912
University of Vermont, College of Medicine	

Twelve other colleges sent official notices to the Council that an increase in requirements would be made. Six of these have since rescinded their action, two have been advised by the Council not to make the requirement at the present time and four others have not made clear statements of the proposed increase in their printed announcements.

For a time this elevation of standards by the better class of colleges will probably be taken advantage of by commercial, low grade colleges which will continue their lack or non-enforcement of standards in order to profit from the influx of students who are turned away from the good schools. This advantage can only be temporary, however, since, in the first place, medical students and their advisors are rapidly learning that it does not pay to spend four or five years in a college of low requirements and with standards so lax that a large percentage of their graduates fail at state license examinations, and, secondly, because state boards are coming to the support of the better colleges by adopting similar standards of preliminary education and by making their examinations of such character that they cannot be passed by applicants who have not had a training in laboratories and clinics. Such action by a considerable number of state boards will make it impossible for low-grade, inefficient medical schools to continue. Even a rigid enforcement of the four-year high school preliminary requirement would force several of these commercial schools to the wall.

At least six medical colleges have provided an optional fifth year of hospital work for which the degree of M.D. *cum laude* is granted. These colleges are:

- Boston University School of Medicine.
- Indiana University School of Medicine.
- Rush Medical College.
- St. Louis University School of Medicine.
- University of Nebraska College of Medicine.
- University and Bellevue Hospital Medical College.

The deans of at least 25 medical colleges have stated that they have more internships each year than they can fill. For these schools, therefore, the final requirement of the American Medical Association's "Ideal Standard," namely, "A sixth year as an intern in a hospital," could be easily enforced.

From the fact that 47 medical colleges have adopted higher entrance requirements it is interesting to note that seven state examining boards have also adopted preliminary requirements in advance of a four-year high school education. These are as follows:

State Examining Board of	No. of Years Required.	Affects Students Matriculating.	Affects all Applicants.
North Dakota	2	1907-08	1911
South Dakota	1	1907-08	1911
Minnesota	2	1908-09	1912
Colorado	1	1908-09	1912
Connecticut	1	1910-11	1914
Kansas	1	1910-11	1914
Indiana	2	1910-11	1914

There are several other states which are contemplating similar increases in their requirements in the near future.

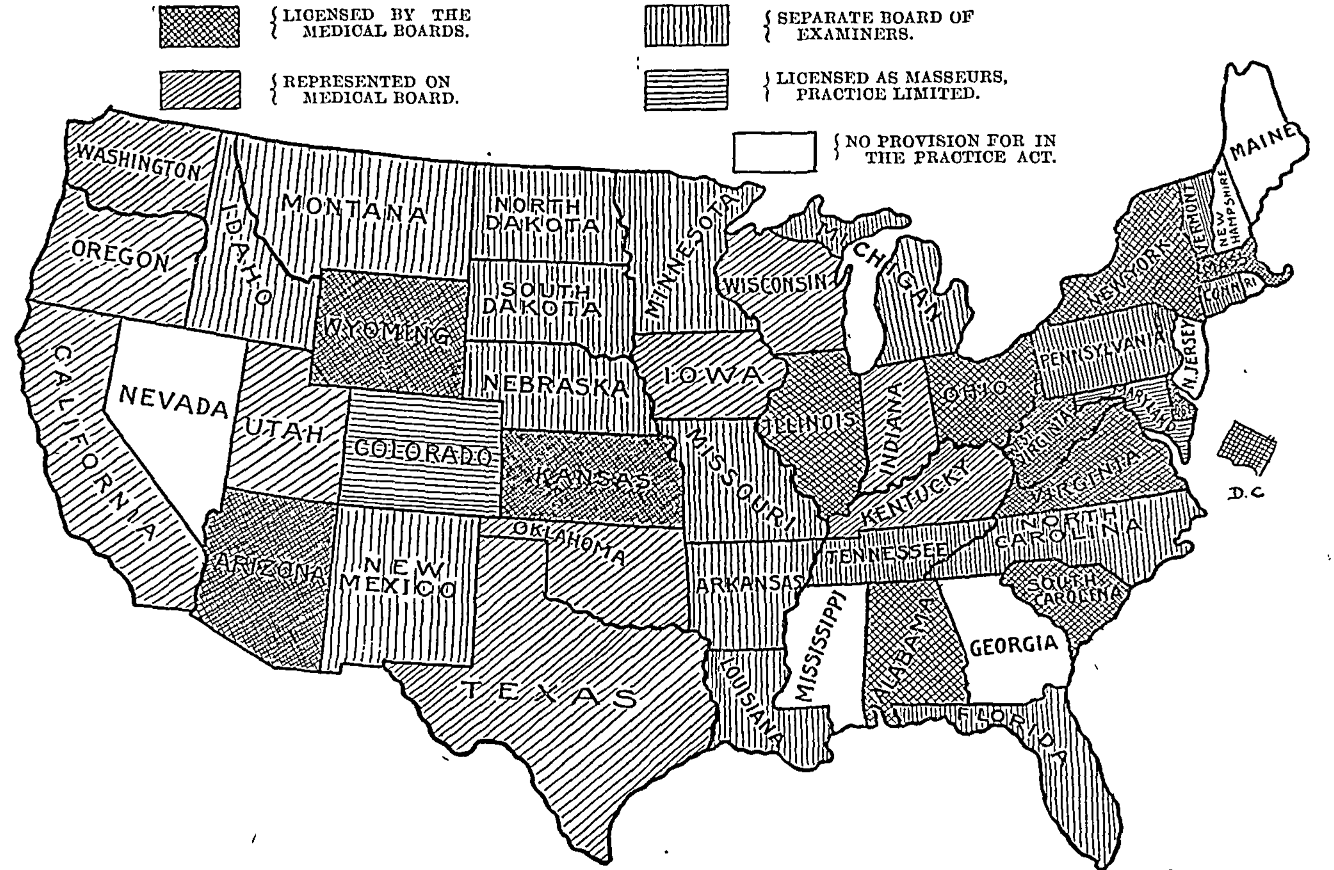
IN CONCLUSION

In conclusion it should be said that although there is still much to be done splendid progress is being made and we can all look forward to the future confident that within a few years medical education and medical licensure in this country will be on a satisfactory basis. Respectfully submitted,

Arthur Dean Bevan, Chairman.
N. P. Colwell, Secretary.

On motion of Dr. C. E. Cantrell, Texas, which was seconded by several, the House of Delegates then adjourned until 2 p. m.

Chart 5.—The Osteopathic Situation



Second Meeting — Monday Afternoon, June 6

The House of Delegates convened at 2 p. m., and was called to order by the Third Vice-President, Dr. Alexander Lambert, New York.

The minutes of the previous meeting were read and approved.

Dr. H. Bert Ellis, Chairman, made a supplementary report of the Committee on Credentials.

Dr. John G. Clark, Pennsylvania, Chairman, read the report of the Board of Public Instruction on Medical Subjects.[1]

On motion of Dr. C. S. Bacon, Illinois, it was referred to the Reference Committee on Legislation and Political Action.

The report of the Committee on Organization was called for, but by request deferred until Tuesday afternoon.

Dr. John H. Blackburn, Kentucky, presented his report as Director of Post-Graduate Work.

On motion, the report was referred to the Reference Committee on Medical Education.

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[1] All committee reports referred to reference committees, will be published in The Journal, June 18.

Report of Committee on Ophthalmia Neonatorum

Dr. F. Parke Lewis, New York, Chairman, read the report.

To the Members of the House of Delegates of the American Medical Association:

Your committee beg leave to present the following report of legislation enacted together with a summary of the official communications received, indicating the further progress of the movement for the control of ophthalmia neonatorum throughout the United States.

ALABAMA

Ophthalmologist, Samuel L. Ledbetter; Obstetrician, W. H. Sanders; Sanitarian, W. H. Sanders.

Dr. Ledbetter introduced the subject at the meeting of the county medical society and the subject was discussed at some length but no action was taken by the society as a body. He also discussed the matter with the Senior Censor and State Health Officer who was rather opposed to taking it up with the State Medical Association, as he thought that the condition was rarely found in the country districts and small towns and that physicians and midwives in the cities seemed to understand the handling of those conditions fairly well. Besides he was, for other reasons, opposed to introducing any further medical legislation in the legislature just at the present time. Dr. Ledbetter had no suggestions to offer but will continue to agitate the matter occasionally.

ARIZONA

Ophthalmologist, Ancil Martin; Obstetrician, W. I. Simpson; Sanitarian, Gov. J. K. Kibbey.

Dr. Ancil Martin reports that nothing has been accomplished along these lines and no papers read on this subject.

ARKANSAS

[illegible]. J. W. Scales; Obstetrician, Edward Pentley; [illegible]nyan.

[illegible]: No laws pertaining to the subject of ophthalmia neonatorum were passed by our last assembly, none were introduced, no papers of any kind relating to this subject were read [illegible] our last state society meeting and none have been published in our [illegible]te journal.

Dr. J. W. Scales: There has been nothing except a resolution introduced in our society looking forward to a law to prevent blindness. Last year I attempted to get our Senator to pass such a bill.

CALIFORNIA

Ophthalmologist, H. Bert Ellis; Obstetrician, F. T. Andrews; Sanitarian, M. Regensberger.

Dr. H. B. Ellis: Our state legislature does not meet until next winter, so we have been unable to do anything in regard to laws on the subject.

COLORADO

Ophthalmologist, Edward Jackson; Obstetrician, E. A. Jayne; Sanitarian, W. H. Davis.

No report.

CONNECTICUT

Ophthalmologist, H. S. Miles; Obstetrician, H. J. Ballard; Sanitarian, Joseph H. Townsend.

Dr. Joseph H. Townsend: Nothing has been done in the state during the past year for the prevention of blindness from ophthalmia neonatorum. We had an agitation on this subject a few years ago which resulted in a law being passed by the Legislature requiring all cases to be reported by the attending physician or midwife to the local health officer. This, with our medical practice act, which is developing better educated physicians and midwives in the state, is doing all that can be done in this matter, so it seems to me. The Connecticut Board of Education of the Blind tells me that there are about ten cases of infantile blindness each year which come to their attention and about thirty per cent. of these are due to ophthalmia neonatorum. There ought not to be even this number, but I do not see that any special campaign of education would do any good or is necessary at this time. The medical profession I think, are doing all that can be done to prevent this disease as well as other puerperal infections. The conditions in this state are somewhat different from what they are in congested centers like New York and Chicago.

DELAWARE

Ophthalmologist, J. A. Ellegood; Obstetrician, F. Belleville; Sanitarian, E. W. Cooper.

J. A. Ellegood: Nothing has been accomplished in this state during the past year for the prevention of blindness from ophthalmia neonatorum. Our people are pre-occupied with the anti-tuberculosis crusade, and the medical inspection of schools. Shall hope to get some attention paid to the prevention of blindness at an early date.

DISTRICT OF COLUMBIA

Ophthalmologist, Robert Scott Lamb; Obstetrician, J. T. Johnson; Sanitarian, W. C. Woodward.

W. C. Woodward: Careful inquiry is being made into all cases of ophthalmia of infants coming to the attention of the Instructive Visiting Nurses, in order to determine whether they are of gonorrheal origin or not, and in order to determine the outcome of such cases. At the request of the health officer, the Washington Obstetrical and Gynecological Society appointed a committee, consisting of Drs. John F. Moran and W. M. Sprigg, to investigate the status of the preventive treatment of ophthalmia neonatorum, which committee submitted a lengthy report. This report was published in the February issue of the *American Journal of Obstetrics*. It was hoped, when the cooperation of the Washington Obstetrical and Gynecological Society was asked, that in event of the presentation of a report by that body recommending action by the health department, looking toward the prevention of ophthalmia neonatorum, it would be possible to adopt preventive measures. So far, however, the funds at the command of the health officer have been insufficient to permit him to do so.

Washington Obstetrical and Gynecological Society: The committee appointed by the president of the Washington Obstetrical and Gynecological Society to investigate the status of the preventive treatment of ophthalmia neonatorum begs leave to submit the following report: A circular letter was sent with the following questions to a number of maternities and obstetricians in the United States and Europe. 1. What is the routine treatment in your hospital for the prevention of ophthalmia neonatorum? 2. Would you recommend the treatment to be carried out by midwives? 3. Do you think the remedy should be dispensed by the health department?

Forty replies were received and are tabulated below. All employ prophylactic measures, but differ in the choice and strength of the solution, technic, regulation of midwives, and the advisability of the health department dispensing the drugs.

Twenty-three used silver nitrate: one, ½ per cent.; ten, 1 per cent.; two, 1½ per cent.; nine, 2 per cent.; and in one the per cent. is not given. Fifteen use argyrol; one, 5 per cent.; one, 6 per cent.; one, 16 per cent.; one 10 to 20 per cent.; four, 20 per cent.; five, 25 per cent.; one, 25 to 50 per cent.; one, 50 per cent.; and in one the per cent. is not mentioned. Five employ sophol; all, 5 per cent. One prefers silver acetate, one per cent; another, hydrarg. bichlor., 1-2000. Protargol is used by four, but supplementary to nitrate of silver in three, hydrarg. bichlor. in one.

The questions 2 and 3 were only submitted to hospitals in the United States, and there were thirty-one replies; twenty-five favored the use of prophylactics by midwives, but several advise that the midwives be taught the proper methods of application, while others recommend that only the substitutes for silver nitrate be employed by them. It is observed that those quoted in this report who oppose the treatment by midwives all use silver nitrate and one of the objectors states that the drug is too powerful and dangerous to be entrusted to the uninitiated.

In reply to question 3, twenty recommend that the prophylactic be dispensed by the health department, while eleven object, one regarding it as another socialistic measure.

It is worthy of note that only 60 per cent. of the institutions quoted use silver nitrate exclusively. These figures were received from widely separated sources and may reasonably be taken as a fair index of the trend of the prophylaxis of ophthalmia in the new-born.

A review of the literature shows that in this country silver nitrate, argyrol, and protargol are the remedies generally employed as prophylactics; while abroad, in addition to these, argonin, collargol, albargin, itrol, sophol, largin, silver acetate, etc., have been employed and recommended. Stephenson says that some of these have already sunk into well-merited oblivion, but others are calculated to replace silver nitrate at no distant day.

Argyrol is rapidly growing in favor, is largely used in private practice, and has been introduced into many hospitals. According to Cragin a 25 per cent. solution is equally as effective as one of 2 per cent. silver nitrate in gonorrheal ophthalmia, does not cause pain or produce irritation, and has the important advantage that it can be applied by the nurse, midwife, or layman without danger. He says, however, it is of comparatively little value in staphylococcus and streptococcus infections. In his service at the Sloane Maternity, in 8,000 births, covering a period of seven years, he used as a prophylactic measure five methods of treatment, with a view of selecting a solution that would give the greatest amount of disinfection with the least irritation. The results were as follows:

Series 1—In 1,000 confinements, 2 per cent. silver nitrate solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, none.

Series 2.—In 1,000 confinements, 1 per cent. silver nitrate solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, none.

Series 3.—In 2,000 confinements, 5 per cent. protargol solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, two.

Series 4.—In 2,000 confinements, 10 per cent. argyrol solution; cases of ophthalmia, thirty-four; eyes lost, one; opacities, two.

Series 5.—In 2,000 confinements, 20 per cent. argyrol solution; cases of ophthalmia, thirty-nine; eyes lost, none; opacities, none.

This series covered a period when there was an epidemic of "pink eye" in the city, and as no gonococci were present in the eyes during the month of its prevalence it was thought by the ophthalmologist who saw the cases in consultation that they were cases of pink eye.

Cragin says that while with the use of 1 per cent. silver nitrate solution and 5 per cent. protargol solution there was less irritation, it looked as if it was gained at the expense of protection, and their use was therefore abandoned. With the 10 per cent. argyrol solution there was a complete absence of irritation, but it was found upon clinical and bacteriological investigation to be of insufficient strength, and therefore did not afford complete immunity.

The 2 per cent. silver nitrate solution and the 20 per cent. argyrol solution were proven to be absolutely bactericidal, and the latter is to be preferred because of its freedom from irritation and it can be applied at frequent intervals, if necessary, with safety.

We have collected from the records of Columbia Hospital, Washington, D. C., from 1882 to June, 1909, 205 cases of ophthalmia, occurring in 7,236 confinements; 176 cases were reported as cured and twenty-seven were improved at the time of leaving the hospital, so the final result of the latter is not known. There were two cases of blindness; one, total; in the other one eye was lost. There were five cases with opacities of one cornea and one with opacities of both corneas. The earlier records are wanting in microscopical examination, but clinically a large percentage of primary ophthalmia were diagnosed as gonorrheal, with the infections occurring some days after birth generally ascribed to other pathogenic organisms. In 1904, argyrol was introduced, first using a 10 per cent. solution, but as this did not prevent ophthalmia, it was increased to 25 per cent. There had been no cases of blindness or opacities since its introduction.

Professor Zweifel speaks enthusiastically of the acetate of silver in the prevention of ophthalmia neonatorum. In a letter recently received from him, he says that in fourteen years' experience with the drug, blennorrhea occurred in only about 0.02 per cent. of the cases. Irritation is not more frequent or greater than with 1 per cent. of nitrate of silver, as was demonstrated by using the silver nitrate in one eye and the silver acetate in the other. Seitz has obtained a like favorable result in 1,000 births in the Numchen Frauenklinik and Scipiades in the Traufferschen Klinik, Budapest.

Darier and his pupil, Valencon, are warm advocates of protargol. They employ it in 15 to 20 per cent. solution and find it to be less painful and irritating than silver nitrate.

Englemann, using protargol, in the Bonner Frauenklinik, observed 20 per cent. of the infection, usually of mild character, in 1,000 births.

Piotrowsky, in the Hebammenlehranstalt, Krakau, noted 10 per cent. reaction in the treatment of 1,030 cases after the use of a 10 per cent. solution of protargol.

V. Herff, in the Frauenspitale, Basel-Stadt, in 3,000 births, with the use of protargol, had only two late infections but there was 30 per cent. primary reaction.

V. Herff, in endeavoring to find a substitute for silver nitrate possessing equal germicidal power but free from its objectionable properties, first tried protargol. While, as just stated, there were no primary infections, he discarded it because of the large percentage of inflammatory reactions. He next tried argyrol, in 520 births, but not being entirely satisfied, he experimented with sophol. It is a combination of formaldehyd nucleinic acid, and 22 per cent. silver. Sophol is a yellowish-white powder, easily soluble in water. The solution must be prepared with cold water, as a warm solution dissociates the loose combination of the formaldehyd in the preparation. In over 6,000 births, V. Herff says there were one primary and one late infection. The early case of infection was due to inoculation in a known gonorrheal case during labor, in which a prolapse cord was replaced. The late infection occurred on the ninth day in an infant whose mother was suffering with *condylomata of the* vulva. There was 10 per cent. primary reaction, usually of a mild character..

In 1,436 births in which sophol was used, in the Munchener Frauenklinik, there were one primary infection (0.07 per cent.) one late infection (0.07 per cent.) and three cases of inflammatory reaction of mild intensity.

[illegible] 1909, Menge has employed sophol in the [illegible] Heidelberg. The sophol solution has [illegible] eye of the infant, and a 1 per cent. silver nitrate solution into the right eye. He finds that irritation occurs less frequently with sophol. Two cases of true blennorrhea, both late infections, have occurred this year, both in the second week. The left eye was infected in one infant and the right eye in the other.

Callatia reports the use of sophol as a prophylactic in 280 births in the Landenspitales, Laibach. There was no early infection, notwithstanding that two of the mothers were suffering with gonorrheal vaginitis at the time of delivery.

Bock and Kraus have also used sophol in inflammatory diseases of the eyes with excellent results. Bock finds it to be particularly effective in recent cases; but in those of long standing, while it rapidly diminishes the discharge, in many instances it is necessary to resort to the use of silver nitrate to effect a cure.

The committee being much impressed with the excellent results obtained with sophol by V. Herff and others was anxious to give it a trial. Through the courtesy of Dr. Cabell, of the visiting staff of Columbus Hospital, and Dr. Lawson, of the visiting staff of Freedman's Hospital, the remedy was used in these institutions during the past summer. A 5 per cent. solution was employed, and it was freshly prepared every two weeks. Altogether the solution was instilled into the eyes of 153 infants, ninety-three in Columbia Hospital, and sixty in Freedman's Hospital. Of those treated at Columbia Hospital, there were thirteen with primary irritation, lasting from a few hours to several days, all yielding to boric acid irrigation. There was no primary infection, although one mother had been under treatment in the hospital for more than a week prior to the delivery for a severe case of gonorrheal vulvovaginitis. The infant's eyes were wide open immediately after birth and had a dull glazed appearance, with clouded cornea. Prompt instillation was made and no infection followed.

There were eight late infections, occurring from the third to the fourteenth day after birth. Six yielded to the sophol and boric acid applications in from a few hours to eight days. One case in which the lanceolatus was found left the hospital on the eleventh day of treatment, improved; and another in which the microscopical examination was negative left also on the eleventh day of treatment improved.

Dr. Lawson reports that sixty infants received the 5 per cent. sophol solution at birth in Freedman's Hospital, and the results were very satisfactory. In but one case was there anything more than a slight inflammatory reaction observed. One baby developed a purulent conjunctivitis, which was slight and cleared up within five days, during which time the sophol solution was instilled three times daily. The mother in this case had a marked vaginal discharge at the time of confinement.

Our personal experience with the use of sophol is in accord with that of other investigators and we regard it as a safe and effective measure for the prevention of ophthalmia neonatorum.

In conclusion, the committee recommends: 1. That immediately following the birth of the infant the eyes should be carefully wiped with sterile gauze, dipped in a saturated solution of boric acid and then a 5 per cent. sophol, 25 to 50 per cent. argyrol, or 10 to 20 per cent. protargol solution used as a prophylactic against ophthalmia neonatorum.

Since late infections comprise one-fourth of the cases of ophthalmia neonatorum and may be due to the faulty application of the prophylactic, or latent gonorrhea, but is more often the result of contamination from the vaginal secretion because of lack of vigilance, or ignorance on the part of attendant or mother; therefore the nurse should be instructed to thoroughly scrub her hands with soap and water and disinfect them before washing the *infant's* eyes, dressing the navel, and bathing the mother. The mother's hands should be cleansed several times daily, particular attention being given to the nails, and she should be repeatedly warned as to the danger of the lochia. By careful attention to these precautions the morbidity from ophthalmia can be greatly reduced it not entirely controlled.

2. That the solution be dispensed in amber-colored sterile tubes sealed with paraffin for use by midwives; a small quantity of sterile gauze be placed in the prophylactic package.

3. That suitable instructions as to technic be printed on the birth certificates.

4. That legislation be enacted for the control of midwives.

5. That midwives be compelled to make report of births within 24 hours following delivery.

6. That the health department furnish the drugs gratuitously to indigent cases.

7. That in cases of ophthalmia occurring in patients under the charge of midwives they be required to summon a physician immediately or notify the health department promptly.

Finally what is need to control this scourge is a hearty cooperation of the medical profession with the health authorities.

FLORIDA

Ophthalmologist, Columbus Drew; Obstetrician, E. N. Liell; Sanitarian, Joseph Y. Porter.

Dr. C. Drew: At the annual meeting of the Florida State Medical Association, held April 6, resolutions were adopted endorsing the work of the American Medical Association in its efforts to prevent blindness from ophthalmia neonatorum, requesting the state board of health to cooperate with the American Medical Association in this work, requesting the local societies also to cooperate, and appointing a committee of three (Dr. C. Drew, Jacksonville, Dr. E. N. Liell, Jacksonville, Dr. Dewitt Webb, St. Augustine) to facilitate the work during the year and to report at the annual meeting of the state association in 1911.

Joseph Y. Porter: The state board of health of Florida has not as yet undertaken any work in this direction. The importance of the subject as a public health problem is [illegible] and it is not unlikely that an effort will be m[illegible] ture to [illegible] of the midwives [illegible] ightful menace to sight— eyes of [illegible] ophthalm[illegible] of that character which may be [illegible]

GEORGIA

Ophthalmologist, H. H. Martin; Obstetrician, F. C. Hodgson; Sanitarian, H. F. Harris.

H. H. Martin proposed a law which provides for the compulsory use of a *prophylactic by midwives and others* and an addition to the birth certificate stating whether or not a prophylactic had been used, the character of the prophylactic being left to the physician. The legislature was asked to secure the enactment of such a law.

IDAHO

Ophthalmologist, Charles R. Hugel.
No report.

ILLINOIS

Ophthalmologist, W. H. Wilder; Obstetrician, C. S. Bacon; Sanitar[illegible] to Inquire into the Condition of th[illegible] *State Board of Charities*, held Ju[illegible] appointed to inquire into the condit[illegible] h a view to formulating plans for the employment of the adult blind and for improving the efficiency of the state care in other particulars. The following were appointed: Clara P. Bourland, of Peoria, chairman, and Dr. John T. McAnally, of Carbondale, representing the State Board of Charities; Geo. W. Jones, superintendent Illinois State School for the Blind, Jacksonville; C. D. Babb, of Homer, trustee of the State School at Jacksonville; Joseph F. Otis and E. J. Nolan, of Chicago, trustees of the Illinois Industrial Home for the Blind at Chicago; Mr. [illegible] blind people in Illinois; Mrs. Alice E. Bat[illegible] go Woman's Club; Dr. Wm. M. Wilder, of [illegible] *Illinois Charitable Eye and Ear Infirm*[illegible] M. Dawes, representing the Chicago Boa[illegible] Elmer E. Hagler, of Springfield, represen[illegible] *ical Society*.

The first meeting of the commission was held in Jacksonville, September 17, at the school for the blind, Mrs. Bourland presiding; Dr. E. E. Haglor was elected secretary. Professor Wilder addressed the commission, and, from statistics presented, demonstrated that from 40 to 45 per cent. of all cases of blindness were absolutely preventable; and notwithstanding that fact, blindness is increasing in all civilized countries. The largest amount of blindness, he said, comes from ophthalmia neonatorum, or blindness of the new-born. This disease, which is easily preventable, causes from 25 to 30 per cent. *of all cases of blindness. Dr. Wilder also called attention* to the prevalence of trachoma in the southern part of the state. Following his lecture, Dr. Wilder held an informal clinic, exhibiting chiefly children in the school who were suffering from the results of ophthalmia neonatorum and trachoma.

A sub-committee of three was appointed, to report at the next meeting, consisting of Dr. Wilder, who is to report suggestions for the prevention of blindness and to recommend the enactment of needed laws; Mr. Jones, to report of the needs of his school and to recommend more efficient legislation; and Mr. Nolan, to make recommendations and suggest such laws as will improve the conditions surrounding the employment of the adult blind.

The second meeting was held in Chicago at the Industrial Home for the Blind, Saturday, December 5.

The sub-committee, consisting of Messrs. Nolan, Jones, and Wilder, made their reports. Dr. Wilder, in his report, stated, that as the state has assumed the responsibility of custodian of the blind poor and may, because of unfavorable circumstances, have more of such afflicted persons thrown on its charge, it should endeavor to study the causes of blindness and if possible seek out means for its prevention. To this end, it is important to collect statistics as to the prevalence and degree of blindness, and so far as possible the exact cause of it in each case.

Dr. Wilder, Dr. McAnally, and Dr. Babb were made a committee to prepare specific recommendations on the prevention of ophthalmia neonatorum. Their report follows:

It is well known that ophthalmia neonatorum is the cause of a large proportion of blindness in this as well as other countries, and that in the specific schools for the blind as many as 25 per cent. to 35 per cent are there because of this disease. It is also a well established fact that by proper and comparatively simple means it may be prevented in a vast majority of cases.

The state should enact a law having for its object the adoption of measures for the prevention of this disease at least in the practice of midwives and in public institutions where obstetric cases are treated..

The state board of health seems to be the proper authority for establishing the necessary rules, regulations and ordinances and enforcing their observance, and for publishing and distributing appropriate information and instruction on the subject.

It is probably best that the specific method to be used for the prevention of ophthalmia neonatorum should not be left to the intelligence and judgment of the state board of health, believing that it will act in accordance with the most advanced existing knowledge. The following form of law is suggested in accordance with the ideas suggested above.

"An act to prevent inflammation of the eyes of the new-born babe, or so-called ophthalmia neonatorum.

Section 1.—The board of health of the state of Illinois is hereby vested with power and authority to publish and distribute such information and instruction, to furnish such remedies and to make such rules, regulations and ordinances as it may deem expedient to prevent the development of inflammation of the eyes of the new-born babe, so-called ophthalmia neonatorum, *in* public hospitals or institutions in which midwifery is practiced, either wholly or in part, and in connection with the practice of midwives.

Section 2.—*Said board of health* is authorized to enforce its rules, regulations, and ordinances on this subject at the expense of the state.

Section 3.—Any person violating any rule, regulation or ordinance of said board of health *regarding the prevention* of ophthalmia neonatorum shall be guilty of a misdemeanor, and shall be punishable by a fine not to exceed $100, or imprisonment not to exceed six months, or both.

The above suggestions are in substance *embodied in the* report of the Committee of the American Academy of Ophthalmology and Oto-Laryngology cooperating with the committee of the American Medical Association on legislative measures to prevent ophthalmia neonatorum, presented to the house of delegates of the American Medical Association, June, 1908.

The central feature of giving the state board of health direction of the whole matter and power to act is, in our judgment, a good one. A law similar in purposes to the one proposed would be more effective than the one now on the statute books (Chap. 38, Sec. 510, Revised Statutes of Illinois) relating to the same object, which by the new enactment could be repealed.

According to the present law, which, so far as I am aware, is not enforced, the nurse or midwife who notices a discharge from the eyes of an infant within two weeks after its birth must report the same to a health officer of the town, or some legally qualified practitioner, within six hours of the discovery, under penalty for failure to do so. The proposed new law contemplates that the midwife shall be instructed by the state board of health in the method of prophylaxis, which she will be compelled to use in every case, and in addition that she will report any cases of the disease that may arise in her practice, to the proper authorities.

INDIANA

Ophthalmologist, Albert E. Bulson; Obstetrician, T. B. Eastman; Sanitarian, J. N. Hurty.

The legislature has not been in session this year, so nothing in a legal way has been accomplished. The subject is being given wide publicity, however. The state board of health has been very progressive in its efforts to further the cause of preventive medicine, including the prevention of ophthalmia neonatorum, although they are not, at the present time distributing silver of nitrate solution. The Tippecanoe county medical society has taken up the matter and are sending out the following circular letter to the various medical societies in Indiana. The next birth certificates will have upon them the recommendations of the committee of the American Medical Association.

Circular sent out by the Medical Society. Because institutions for the instruction of the blind (which keep accurate data, concerning *the cause of the blindness of their pupils)* report about thirty-five per cent. of their pupils to be blind as the result of ophthalmia neonatorum, the Tippecanoe County Medical Society, by its committee on ophthalmia neonatorum, asks the cooperation of the profession, *by county and district society action and otherwise,* in a propaganda looking to the abolition of the disease in this state.

We *recommend that the widest publicity be given the* Credé method, which consists in dropping into each eye of the new-born babe, *by the physician, one drop of a 1 per cent. solution of silver* nitrate, as soon as possible after the birth of the baby's head and the cleansing thereof.

We recommend cooperation of all societies to secure of the next legislature the passage of a law as will best stamp out this preventable disease, and save eyes otherwise doomed to destruction.

We recommend that each county and district society appoint a committee on ophthalmia neonatorum in order that it may in its own county use its influence with the profession and public in eradicating this disease.

We recommend that each county and district society take action, endorsing this propaganda, and that such action be reported to the undersigned committee not later than May 15, that the Committee of the American Medical Association on ophthalmia neonatorum may be informed as to the progress made in this state as to the above actions. Said committee will report its progress to the next meeting of the American Medical Association, the first week in June.

Fraternally submitted.

GEO. E. KEIPER, Chairman;
EARL VAN REED,
President, Tippecanoe Co. Society;
W. N. RESER, Secretary;
PROF. SEVERANCE BURRAGE.

....

The ———— County Medical Society hereby endorses the propaganda of the Tippecanoe County Medical Society, looking to the abolition of ophthalmia neonatorum in Indiana.

President, ...
Secretary, ...

Date ....

IOWA

Ophthalmologist, E. R. Lewis; Obstetrician, W. B. LaForce; Sanitarian, F. W. Powers.

E. R. Lewis, Symposium: Ophthalmia Neonatorum in Iowa, with *a consideration* of State Prophylaxis: Last year the Iowa State Medical Society, in common with most other state *medical societies,* appointed a committee to take up the matter of the prevention of ophthalmia neonatorum in the state. It has seemed *advisable* to this committee to recommend taking steps to secure accurate and complete data in regard to this disease in Iowa, *for* the obvious reason that up to the present we have had no means of ascertaining anything definite concerning it. If state prophylaxis is adopted and the taxpayer pays the bills, even though they be small ones, he should also be provided with a means *of comparing* results and of knowing whether or not the disease is being stamped out. Should future agitation bring into *question* the advisability of giving up state prophylaxis of this disease the data concerning the disease would at once furnish accurate *proof* of the failure or success of the preventive measures. The means of securing this data is already in our hands, in the birth certificate. It is necessary only to add a few lines to the birth certificate already in use. The requiring of attendants to record such data on the birth certificate would not only be the means of assembling statistics concerning the disease, it would also be a very practical means of enforcing attention on the part of the attendants *to prophylactic* measures. The fear of consequences, should failure to use prophylaxis be followed by the disease, would do much to prevent *neglect* of proper care of the eyes at birth.

Revocation of license *to practice should be the penalty* for repeated neglect to use prophylaxis or for false entries on the birth certificate.

Very effective work has been accomplished in the state of Iowa.

KANSAS

Ophthalmologist, Robert L. Alkire; Obstetrician, F. Harper; Sanitarian, L. A. Godeon.

No report.

KENTUCKY

Ophthalmologist, F. Manning Brown; Obstetrician, L. S. McMurtry; Sanitarian, Jos. M. Mathews.

No. report.

LOUISIANA

Ophthalmologist, H. Dickson Bruns; Obstetrician, S. M. D. Clark; Sanitarian, C. H. Irion.

Symposium on *ophthalmia* neonatorum was read by Dr. E. A. Robin, Dr. N. Feingold, Dr. Robert Salter and Dr. Dickson, before the County Medical Association. The papers were amplified and read at the meeting of the Louisiana State Medical Society and were to be *published among the transactions of the* society in the New Orleans *Medical and Surgical Journal,* after which they will be *acted upon by the state and city boards of health.*

MAINE

Ophthalmologist, E. E. Holt; Obstetrician, Fred W. Mann; Sanitarian, A. G. Young.

No new action has been taken during the past year for the preventation of blindness. However, the following act appears upon the statute books: Chapter 18. Prevention of Blindness. Section 90. If one or both eyes of an infant become reddened or inflamed at any time within four weeks after birth, the midwife, nurse or person having charge of said infant shall report the condition of the eyes at once to some legally qualified practitioner of medicine of the ctiy, town or district in which the parents of the infant reside. Any failure to comply with the provisions of this section shall be punishable by a fine of not to exceed one hundred dollars, or imprisonment not to exceed six months.

MARYLAND

Ophthalmologist, Hiram Wood, M.D.; Obstetrician, W. A. B. Sellman; Sanitarian, Wm. H. Welsh.

Nothing of importance has been accomplished. Several public addresses have been delivered by Dr. Hiram Woods on the general subject of prevention of blindness and especially ophthalmia neonatorum. *He advised changes providing for educating midwives and* licensing them. 2. Better birth registration. 3. Systematic instruction, by *the society for prevention of blindness of present midwives* who are exempt under the new law. 4. Compulsory prophylaxis for Baltimore later.

An excellent midwifery bill has been adopted by the legislature of the state of Maryland. It provides for the issuing of a license without examination to those actually practicing on the first of July, 1910, before the passage of the law, for all others an examination is required before a license shall be issued. It is required that the applicant shall, at least, know how to read and write and make out a birth certificate correctly, as required by law. The state board of health has charge of the details of the examination. It is also required that the candidate shall have attended at least five cases of child birth and is competent to attend ordinary cases of labor. The former law providing a penalty for the failure to report the existence of the symptoms of ophthalmia neonatorum remains unchanged. It is the first step *toward the elimination of* the midwife evil.

MASSACHUSETTS

Ophthalmologist, Myles Standish; Obstetrician, D. H. Craig; Sanitarian, Henry P. Walcot.

A most valuable paper by Dr. Mark Richardson, entitled Ophthalmia Neonatorum; Facts Concerning the Disease and its Prevention as Affecting the State of Massachusetts was read before the associated boards of health of Massachusetts and later published in the *American Journal of Public Hygiene.* The effect of these official actions are best studied in the following table kindly furnished by Dr. S. H. Durgin, chairman of the Boston board of health.

REPORTED CASES OF OPHTHALMIA NEONATORUM IN BOSTON

Year		Cases reported	Treated in hospitals	Brought from other cities
1905	(from Sept. 5)......	16	3	..
1906	....	34	13	1
1907	....	17	7	..
1908	....	39	31	2
1909	....	171	115	30

All cases of *ophthalmia neonatorum reported* and not already under treatment in hospitals are seen by a medical inspector and if *proper care cannot be secured* in the home the case is sent to the hospital.

The records of the state board of health show no cases reported in 1905, 1906, or 1907; 20 cases in 1908 and 100 cases in 1909. *There can* be no doubt that the large increase in reported cases in 1909 was due to the action of the state board of health in putting the disease on the notifiable list, in sending to each practitioner a communication calling his attention to the law and in giving him detailed information concerning treatment. It is, of course, too early to estimate the effect upon the aggregate blindness of the state. The state board of health of Massachusetts has under consideration, the free distribution *of the prophylactic.*

The conclusions at which Dr. Richardson arrives are:

1. The cause of *ophthalmia* neonatorum and the manner of its spread are known.
2. *Reliable* methods of preventing the disease are known.
3. The law in Massachusetts is such that the disease, if promptly *reported may* still be deprived of many of its destructive effects through energetic cooperation of local and state health authorities.
4. Improvement in conditions is, undoubtedly, going on, but it is slow. Rapid change for the better can be *obtained only through* a sharp appeal to the self-interest of the practitioner. There can be little doubt that vigorous *enforcement of the law concerning*

notification, with or without resulting convictions, would, through the publicity alone, impress the importance of this matter upon the profession to an extent possible in no other way.

5. The practice of midwives in Massachusetts is extensive and without supervision. They should be regulated or suppressed.

In July of 1909 an important circular was issued by the Board of health in which attention was called to the revised laws. The following paragraphs are italicized: "Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of a city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punishable by a fine of not more than one hundred dollars.

"If one or both eyes of an infant whom or whose mother he is called to visit become inflamed, swollen and red, and show an unnatur[illegible] o weeks after the birth of such infant, he [illegible] notice thereof in writing over his own sigr[illegible] or board of health of the town; and if he refuses or neglects to give such notice he shall forfeit not less than fifty nor more than two hundred dollars for each offense."

It also includes suggestions for the prevention and treatment of ophthalmia neonatorum as prepared by the Massachusetts Medical Society. This is of such importance as to be given in full as follows:

"Ophthalmia neonatorum is an inflammation of the eyes of the new-born, which is usually due to infection by a specific organism. If not properly treated, blindness is a very common result. A large proportion of the blind babies owe their loss of sight to this cause. Blindness rarely occurs if the disease is properly treated from the beginning. The possibility of any baby becoming infected at the time of confinement should be constantly borne in mind, and it is desirable to carry out a routine treatment in every case.

PREVENTIVE TREATMENT

1. After washing the lids and adjacent tissues, drop into the eye of every new-born babe a few drops of a 25 per cent. solution of argyrol or a 5 per cent. solution of protargol.
2. It is not necessary to wash the solution from the eyes, as it is practically non-irritating.
3. Care should be taken that the end of the dropper does not touch the eye-ball, and that the finger-nails do not come in contact with the cornea.
4. The solution of argyrol or protargol should be freshly prepared for each confinement case.

SUGGESTIONS

Before leaving a confinement case, the physician should instruct the nurse, of, if a nurse is not employed, the most intelligent member of the family, to notify the doctor at once if the eyes become inflammed and discharge matter. He should also call attention to section 49 of chapter 75 of the Revised Massachusetts Laws.

2. When possible these cases should be placed in the hands of an occulist. It is extremely desirable that all cases met with among the poorer classes be transferred at once to the Massachusetts Eye and Ear Infirmary, or some similar institution in the city where they occur. This is advisable, not only for the good of the child, but for the safety of other members of the family as well. For the fact must not be lost sight of that the disease is very contagious, and that, if the eyes of an adult or older child become infected, it means an inflammation of even greater seriousness than when present in the eye of the new-born babe.

3. If circumstances make it necessary that the child be treated at home, the serious and infectious nature of the disease should be impressed upon the family. The baby should be separated from the other children. Caution should be given to those having the care of the child that their hands should be frequently washed and not brought in contact with their own eyes. All bits of cotton used about the eyes should be carefully separated and thoroughly boiled.

4. The following treatment should be begun at once. Wash the eyes every forty minutes with a 3 per cent. boric acid solution. This requires the services of two intelligent persons, preferably nurses, one for day and the other for night duty. They should be carefully instructed that in cleansing the eyes the inner angle and edges of the lids, which are usually tight shut, should be freed from discharge by means of a bit of absorbent cotton wet with the solution. It the lids are then separated most of the retained secretion will escape and what remains can easily be dislodged by taking another bit of cotton, thoroughly saturated with the solution, holding it an inch or two above the eyes, and then by pressure causing a stream to flow gently into the conjunctival sac. The lids should be dried after each washing, and four or five times a day, it is well to apply a little simple ointment to their edges. Nurses or attendants doing this work should have their finger-nails trimmed as short as possible, for if a slight abrasion of the cornea be made in the process of washing the eyes or separating the lids, it will be quickly followed by infection and ulceration. The danger of the baby scratching the cornea with its finger-nails should also be prevented by confining the hands.

Next in importance to cleanliness is the use of some silver salt. A 25 per cent. solution of argyrol or a 5 per cent. solution of protargol may be used freely every four hours, the eyes to be first freed from secretion. In applying the remedy, the child should be placed flat on the back, and the head so held that the solution will not quickly escape from the eyes. The lids being separated with the thumb and finger, a few drops should be instilled with an eye-dropper. Careful instructions should be given, however, that the end of the dropper be not brought in contact with the cornea, or the instillation made with too great force. This treatment, frequently cleansing the eyes and the use of argyrol, or protargol, if it can be thoroughly and systematically carried out, will, with rare exceptions, ensure a perfect recovery.

MICHIGAN

Opthalmologist, W. R. Parker; Obstetrician, J. H. Carstens; Sanitarian, Angus McLean.

Dr. J. H. Carstens: I can find no papers on the subject of ophthalmia neonatorum. I personally, have had a number of talks with our health officer. The trouble with enforcing the law is the ignorance of midwives and we now have a proposition before the aldermen to put them under the control of the health board. We will gradually get this under control.

Dr. Walter R. Parker: For various reasons it has not seemed advisable to make a frontal attack just at present. I have not missed an opportunity to bring the matter up. Have a talk in Ann Arbor to-morrow night before the Young Men's Christian Association. I believe a little more educational work is necessary before the professional men will take it up in earnest. I think, however, that next year the whole matter can be brought up before the society in a way that would be more effective and produce better results than to attempt anything at the present time.

MINNESOTA

Ophthalmologist, Frank C. Todd; Obstetrician, A. B. Cates.

An important symposium was presented at the forty-first annual meeting of the Minnesota Medical Association, held at Winona, October 14 and 15, 1909. A comprehensive and valuable paper was read by Frank C. Todd, entitled Unnecessary Blindness, and one on Etiology and Prophylaxis of Ophthalmia Neonatorum, by Jennings C. Litzenburg, of University of Minnesota. Resolutions to accomplish the ends sought were passed by the association and at the proper time an effort will be made to obtain legislation upon the subject.

MONTANA

[illegible] hn A. Donovan; Obstetrician, D. Campbell; [illegible]

[illegible] Year before last the question occupied the greater portion of the time of the public heal[illegible] tions were adopted relative to the nature of [illegible] and were sent to the legislature of our state. [illegible] in the hope of securing some legislation on thi[illegible] killed.

Dr. Donald Campbell: Nothing has been done in our state the past year. Our state society meets in May and we hope to get some resolutions passed, then, if nothing else.

MISSISSIPPI

Ophthalmologist, Jas. B. Bullitt; Obstetrician, J. C. Blackstrom; Sanitarian, B. F. Ward.

Dr. James B. Bullitt: The past year has shown some progress in Mississippi in this fight, but not nearly so much as might be desired. No papers have been read before any large gatherings but there have been a number of papers and a good many talks made before the various county medical societies. The committee on legislation of the State Medical Association, in cooperation with the state board of health, has made a strong effort to pass a bill this winter, looking toward the accurate collection of vital statistics, including ophthalmia. The bill failed to pass but some progress was made toward educating some of the legislature along this line, and we hope will bring some results at the next meeting.

MISSOURI

Ophthalmologist, P. I. Leonard; Obstetrician, T J. Beattie; Sanitarian, E. S. Ballard.

A paper entitled The Prevention of Ophthalmia Neonatorum was read in May, 1909, and published in the August number of the *Journal of the Missouri State Medical Association*. The following law is now upon the Missouri statute, but is not enforced.

Section 7530.—Midwife to report case of sore eyes to physician. Should one or both of the lids of either or of both eyes of an infant become red or swollen, or should there be any discharge from either or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse or other person having charge of said infant at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine (Laws, 1895, p. 153).

Section 7531.—Health officer to furnish copy of law to midwife—secretary of state to print same. Every health officer shall furnish a copy of this article to each and every person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of this article to be printed, and shall supply the same to such health officers on application (Laws, 1895).

Section 7532.—Violation of the law a misdemeanor-punishment. Any failure to comply with the provisions of this article shall be a misdemeanor, and shall be punishable by a fine of not less than ten or not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment (Laws, 1895, p. 153).

Missouri now has an act to provide for the immediate registration of all births and deaths under the supervision of the state board of health, and is in a position to have this law enforced.

NEBRASKA

Ophthalmologist, Harold Gifford; Obstetrician, W. C. Henry; Sanitarian, W. T. Johnson.

Dr. H. Gifford: About seventeen years ago I had a bill introduced into the Nebraska legislature placing ophthalmia neonatorum on the contagious disease list, and making it obligatory for midwives to report all cases to the nearest board of health, which was then to be instructed to advise parents of the danger of the disease and of the necessity of medical treatment. This bill, although recommended unanimously by the state society, was killed in the committee of the state legislature. Since then nothing has been done, although I propose to bring up a similar bill at the next meeting of the state legislature.

NEVADA

Obstetrician, S. K. Morrison.

Dr. S. K. Morrison writes: While the state association or its county branches have done nothing in an official way toward the enactment of laws, nor any other actions as a body, I personally have communicated with every doctor practicing in the state of Nevada, I could reach, asking them the number of cases they have had of ophthalmia neonatorum, the routine practice concerning the care of the eyes of the new-born and results of cases they have had, and I find that there were but five cases reported to me in the whole state of Nevada for the last twenty years, and only one of these resulted in complete blindness. The majority of the men are using an instillation of silver nitrate solution immediately after birth, the balance are using boric acid and silver nitrate wherever there is any suspicion that the mother is infected.

NEW HAMPSHIRE

Ophthalmologist, C. B. Hammond; Obstetrician, W. B. Garland; Sanitarian, Irving A. Watson.

Dr. Charles Hammond: During the last session of the New Hampshire legislature, there was a bill regulating the treatment of the eyes of the new-born, presented to it asking for its enactment, but it was turned down. There never has been a law on this subject, and no papers have been read in any organization of any kind relative to it. We are to try organization another year and hope for better results. There have been so few cases of ophthalmia neonatorum throughout the state that the physicians are a little apathetic regarding it. The only suggestion I have to make is to "Stick to the work if it takes years" to do it. We are on the right road, I am convinced.

NEW JERSEY

Ophthalmologist, C. J. Kipp; Obstetrician, Charles L. Ill; Sanitarian, B. S. Keator.

At the annual meeting of the Medical Society of New Jersey, held at Cape May, N. J., June 23, 1909, Dr. Charles J. Kipp introduced the following resolution:

Resolved, That this society appoint a committee which shall put itself in communication with the state board of health and with each component society to adopt a method to put a stop to ophthalmia neonatorum.

That it be recommended that the state shall make a sufficient appropriation to the state board of health to put the necessary enactments into force and to prosecute their violation.

That the new law now existing with regard to reporting cases of this disease, be so amended as to make it enforceable.

That ophthalmia neonatorum be placed on the list of communicable diseases by the state board of health and by all local boards of health.

That a law be passed compelling midwives to use such prophylactics as may be recommended by the state board of health.

A motion was made, seconded and carried that the resolution be referred to a committee to put the matter in shape for action by the society.

At the same meeting a paper on the prevention and treatment of ophthalmia neonatorum was read by Dr. T. R. Paganelli, of Hoboken, N. J.

With a view of bringing this subject again to the attention of the members of this society, the Committee on Prize Essays has selected as the subject of the essay, "The Causation, Prevention and Treatment of Ophthalmia Neonatorum, with Special Reference to Methods of Prevention Applicable in Private Practice." To the best essay will be awarded the prize of one hundred dollars, to the second a gold medal, of the value of fifty dollars.

The committee on ophthalmia neonatorum, with the aid of the attorney general of the state, has prepared an amendment to the law of 1895, an act for the prevention of blindness in the state of New Jersey, of which a copy is enclosed. We have no reason to doubt that the amendment will be passed. As soon as this is done the state board of health will distribute to all known practitioners of medicine and midwives, a copy of the law as amended, together with circular containing directions as to approved methods of prevention and treatment of ophthalmia.

A supplement to an act entitled "An act to regulate the practice of midwifery in the state of New Jersey" has been introduced in the legislature and will probably be passed.

In the hospitals with maternity wards where Credé's method is used, no cases of ophthalmia developed in the children born there during the year.

In the Newark Charitable Eye and Ear Infirmary, the average percentage of cases of ophthalmia neonatorum during the twenty-four years was 0.8 per cent. of all eye diseases. During the last four years it has been a little above 0.35 per cent. Most of the cases were in children born with the assistance of midwives. We rarely see a case in general practice.

For the substance of the law of 1895 see the report of the committee for last year.

NEW YORK

Ophthalmologist, Charles S. Bull; Obstetrician, H. J. Bolt; Sanitarian, Eugene H. Porter.

In his report to the Governor, Dr. Eugene H. Porter states: This (ophthalmia neonatorum) has been placed in the list of diseases of which Health Officers are required to make report; forty cases have been reported, no report on it from New York City being included.

This is the first entire year of work in this direction. It has been taken up for the purpose of saving new-born children from a disease which is almost certain to result in blindness. The disease is not common; it is infrequent enough to occur but few times or possibly not at all in the experience of the average physician. A suitable prophylactic applied to the eyes at birth will prevent its development. Securing its report is only a step towards effecting its control. The chief work on it this year by the department has been to induce physicians and midwives to habitually and uniformly use preventive measures on the eyes of every new-born child with which they have to do. Pledge cards to do this have during the year been sent to every practicing physician in the state outside of New York city, and every midwife whose name could be secured. Return postals to this end have been sent to 6,353 physicians and to 157 midwives: 3,702 of the former and 56 of the latter have thus far signed this pledge. This work has received general commendation from the medical profession in whatever comment is made in connection with the return of the pledge cards.

There has also been placed on the certificates of birth a question as to whether ophthalmia prophylaxis has been used in the eyes of the child whose birth is reported. The purpose of this is to keep constantly before the obstetrician this measure. Physicians will not misinterpret this as an official demand or as an interference with individual judgment as to treatment, when they reflect on the importance of the uniform and routine use of the procedure which will prevent a grave disease. During the year a prophylactic outfit consisting of a solution of nitrate of silver with apparatus and directions for its use has been prepared and a large number sent to health officers for ratuitous distribution to every obstetrician.

NORTH CAROLINA

Ophthalmologist, H. H. Briggs; Obstetrician, J. F. Highsmith; Sanitarian, George G. Thoma.

Dr. R. H. Lewis reports that nothing has been done during the last legislature. Dr. Rankin, the new secretary of the board has promised his support during the next legislature. He is in favor of trying the New York plan of getting the physicians to sign a pledge to use Credé's method in all cases.

NORTH DAKOTA

Ophthalmologist, Henry Beaudoux; Obstetrician, F. J. Campbell; Sanitarian, J. Grassick.

J. Grassick reports: No laws have been passed during the year of 1909 bearing on ophthalmia neonatorum. We have been doing education work which should count for something.

OHIO

Ophthalmologist, Mark D. Stevenson; Obstetrician, C. L. Bonnifield; Sanitarian, C. O. Probst.

Early in the present year, an extensive campaign for the education of the people for the *propaganda* in the interest of prevention of blindness was carried on under the direction of the Ohio State Commission for the Blind. Mr. M. C. C. F. Campbell, of Boston, spent six weeks in going from town to town delivering lectures with lantern slides and other illustrations. An enormous amount of literature was distributed. It was estimated that 17,000 columns on this subject appeared in the various local papers. Much important statistical work has been done by the commission.

OKLAHOMA

Ophthalmologist, J. E. Fowler; Sanitarian, B. F. Hamilton.
No report.

OREGON

Ophthalmologist, J. F. Dickson; Obstetrician, W. E. Lewis.

Dr. J. F. Dickson reports: There is not much to report except in preliminary work. Papers have been read before the State and County societies, the actions of the American Medical Association heartily endorsed, and at the last meeting of our State Board of Health, held on the 25th, ophthalmia neonatorum was placed on the list of diseases to be reported and a bulletin containing full directions for treatment, etc. (similar to that issued by the New Board) is to be sent to every physician and midwife in the state. The State Board of Health bulletin, which will be issued about the end of April, will also contain a chapter on the diagnosis, prophylaxis and treatment of this disease. Our State Medical Society meets next June, at which time definite plans will be made and a committee appointed to draft, or adopt, a suitable law covering all the points urged by your committee, and, with the aid of the City and County Medical Societies, a determined effort will be made to have it passed at our next legislature, which meets in January, 1911.

PENNSYLVANIA

Ophthalmologist, G. E. deSchweinitz; Obstetrician, Joseph Price; Sanitarian, Samuel G. Dixon.

Dr. Samuel G. Dixon: The Department of Health of this commonwealth has not been able to compile statistics on the prevalence of ophthalmia neonatorum, for the reason that the only law on our statute books referring to this disease requires that a report be made to medical men. This department did have copies of the Act, together with a circular letter, mailed to every physician in the commonwealth about one year ago. Copies with suitable letters were sent to all of the Department of Health Officers in the field, to the secretaries of the Boards of Health in all cities, towns and boroughs, and to every practicing midwife. No one connected with the department has published any papers on the subject but I did give wide newspaper publicity to the necessity for making reports at the time copies of the Act were distributed. This department is in full sympathy with the work and will be glad to co-operate with you in advancing the work.

RHODE ISLAND

Ophthalmologist, C. W. Van Benschoten; Obstetrician, D. F. Gray; Sanitarian, A. C. Sprague.

Dr. Gardner T. Swarts: As chairman of the Committee on Ophthalmia Neonatorum, I have to report to the Conference of State and Provincial Boards of Health of North America at its next meeting in Washington, April 28. I am receiving inquiries from the different state, either boards of health or ophthalmological societies, in reference to the nitrate of silver outfit. The supply which we sent out last year was fully appreciated by the physicians and we are sending out another supply this year. As the result of reading a very exhaustive report made by the Ophthalmological Society of the District of Columbia, I am looking up the question of utilizing sophol in place of the nitrate of silver. New York has sent out about 25,000 of the outfits, and Dr. Porter informs me that they had forty cases in 1909. I am about to write to the various secretaries of boards of health to ascertain which, if any others, have taken the matter up and how far they have gone.

SOUTH CAROLINA

Ophthalmologist, E. D. Parker; Obstetrician, E. S. Cathcart; Sanitarian, T. Grange Simon.

Dr. Kollock reports that in the latter part of the nineties, he presented the necessity of securing legislation for the prevention of the increase of blindness before the South Carolina Medical Association and finally succeeded in getting a law which was better than none. The law only applies to towns and cities of 1,000 inhabitants and over and the punishment for not reporting such cases was only a fine of twenty dollars or imprisonment for one month, or both. Dr. Kollock has devoted much time to this subject in his lecture to nurses of the Roper Hospital.

SOUTH DAKOTA

Ophthalmologist, E. O. Miller; Sanitarian, H. A. Peabody.
No report.

TENNESSEE

Ophthalmologist, G. C. Savage; Obstetrician, R. E. Fort; Sanitarian, J. A. Albright.

Dr. G. C. Savage: From time to time during the past quarter of a century the profession of our state have heard much of ophthalmia neonatorum and how to manage it. We have, up to the present, no law on our statute books touching this disease, and our legislature will not meet again until January, 1911.

TEXAS

Ophthalmologist, J. C. McReynolds; Obstetrician, C. E. Cantrell; Sanitarian, William Brumby.

C. E. Cantrell: A paper was read at the last meeting of the State Association at which it was suggested that a paper be read at the open meeting which is held annually in the county societies. This suggestion was adopted. From the Rules and Regulations of the Texas State Board of Health and made operative Feb. 1, 1910. Rule 22, "Nurses and Midwives shall report redness of eyelids or inflammation to Health Officer. Whenever any nurse, midwife or other person not a legally qualified practitioner of medicine shall notice inflammation of the eyes or redness of the lids in a new-born child under his or her care, it shall be the duty of such person to report the same to the local health authority, or in the absence, any reputable physician, within twelve hours of the time the disease is first noticed.

UTAH

Ophthalmologist, Fred Stauffer; Obstetrician, F. S. Bascom; Sanitarian, F. S. Bascom.

No new laws have been enacted during the past year regarding the prevention of blindness from ophthalmia neonatorum. No papers have been read before the medical societies or other organizations with reference to this subject. It is reported that there ophthalmia neonatorum is rare. There are some old laws on the statute books of the state which require a prevention treatment (Credé's method) and any physician not taking the precaution is rendered liable.

VERMONT

Ophthalmologist, F. J. Arnold; Obstetrician, C. W. Bartlett.

Charles S. Caverly: Nothing has been accomplished in this state during the past year toward the prevention of ophthalmia neonatorum and no papers have been read before any medical or popular organizations on this subject.

VIRGINIA

Ophthalmologist, J. A. White; Obstetrician, R. C. Kight; Sanitarian, R. W. Martin.

Joseph A. White: Nothing has been done in Virginia in regard to ophthalmia neonatorum. No papers that I am aware of have been read before the medical association, or any popular organizations. No laws in reference to the matter have been enacted. I have tried to interest our Board of Health in the matter, but so far without success, and it is a difficult matter to interest any of our legislature in laws regarding the public health, as there are no politics in it.

WASHINGTON

Ophthalmologist, David deBeck; Obstetrician, William H. Hall; Sanitarian, J. M. Semple.

Eugene R. Keeley: This state has no laws on the subject. I do not believe that any papers have been read on this subject before any of the medical societies.

WEST VIRGINIA

Ophthalmologist, T. W. Moore; Obstetrician, J. Cannady; Sanitarian, J. E. Robins.

No report.

WISCONSIN

Ophthalmologist, Nelson M. Black; Obstetrician, C. H. Mason; Sanitarian, C. A. Harper.

L. W. Hutchcroft: At the 1909 session of the legislature, this board succeeded in having enacted into law a provision very similar to the uniform law recommended by the association. This law together with instructions for the proper treatment of the disease, is printed in the "Powers and Duties," issued by our board and is also given on the covers of all birth booklets which are distributed to physicians, midwives and others persons required to report births.

WYOMING

Sanitarian, Fred Horton.

No report.

CONCLUSIONS

In a paper published in THE JOURNAL of the American Medical Association just prior to the meeting of 1906 and which resulted in the appointment of the committee on ophthalmia neonatorum, it was urged that the perfect organization of the physicians of the country in this great national body through its state and county constituents would make it possible and practicable to carry into effect a reform movement like the prevention of the unnecessary blindness of babies.

By the adoption of some uniform method of procedure which could be taken up in each of the states and in these through the district and county organizations, it would be possible in a comparatively short time to reach the ultimate unit and the entire profession acting together would exercise an influence that would be irresistible. Such a movement in a less coherent organization would be impossible and the exceedingly gratifying results which have so far been obtained have been due to the cordial effective and untiring support which has been given to the efforts of the central committee from one end of the nation to the other.

It became evident as the work opened up that a relatively uniform method of procedure was essential to success. Most physicians do not need to be told what to do to prevent or cure a gonococcic birth infection, but because of the infrequency of these cases in the daily work of the average general practitioner and the disastrous consequences which follow the neglect of early treatment, the danger in the occasional case is overlooked in a great number of cases and the aggregated blindness is, therefore, by no means inconsiderable. The only way in which the careless or indifferent individual can be reached is by making general the adoption of a plan which with him, as with others, will become a routine method of procedure. In some instances, a seeming indifference has been shown because of the expressed belief that in that particular section of the world, ophthalmia neonatorum is non-existent. In almost every such instance, further investigation has shown that the cases simply had not been brought to public notice. One exceedingly efficient health officer wrote that the disease was practically unknown in his little state, but a subsequent letter reported that he had found four cases in his own town. He has become a most enthusiastic propagandist for prophylaxis. Gonococcic birth infections occur wherever gonorrhea is found and this disease, alas, is ubiquitous.

If we would wipe out this pestilence, it can only be done through the coordinated efforts of the organized medical profession. So your committee urges once more and with added emphasis, its recommendations of one year ago: Make renewed efforts through the state and county societies to have births reported to the health officer promptly; secure adequate midwife laws or give such improved obstetric teaching as will drive the midwife out of business, as has practically been done in Boston; ask on every birth certificate, whether or not a prophylactic has been used, and if not, why not—not as has already been shown by the New York State Board of Health in its monthly Bulletin, as an infringement of personal liberty (for every obstetrician may of course do as he will)—but as a reminder, to the indifferent and careless, of the necessity of protecting the babe from possible disaster almost worse than death. Distribute the chosen and inexpensive prophylactic through the state Department of Health generously and gratuitously. Every time the accoucheur sees the little package with its warning literature, it is an impressive object lesson and if one child is thereby saved from blindness, it is worth more than the cost of the distribution of the preparation throughout an entire state. Secure in the cities adequate provision in the hospitals for children in whom infective inflammation has occurred; special nurses for continuous day and night duty are expensive and increase the *per capita* cost of maintenance. They are not always provided for pauper babies, but there is no hospital management so devoid of human feeling as to permit even a beggar's child to become blind when the danger is pointed out. Moreover, a blind person saddled for life on a community is an expensive luxury. Prophylaxis and early treatment are prudent economic measures on the part of any commonwealth.

It early became apparent to your committee that any preventive propaganda to be successful must have the support of the general public. When the patient reaches the physician, the disease is an accomplished fact. In order that it may be anticipated and prevented, measures must be initiated and carried into effect by the people themselves. Our efforts for the prevention of tuberculosis never gave any hope of success until they took the form of a popular movement. Your committee was exceedingly fortunate, therefore, as already reported, in securing the cooperation of the committee on prevention of the New York Association for the Blind with the most generous financial support of the Russell Sage Foundation. Six valuable publications have been issued by this latter organization for general gratuitous distribution. An extensive practical exhibit on ophthalmia neonatorum with stereopticon slides and the skeleton of a lecture has been provided and will be loaned to our committees for demonstrations before state or other societies, or for popular lectures on any occasion when not otherwise in use. Associations have also been formed in others of the states, and in several of them commissions for the blind, that of Massachusetts having an annual appropriation of forty thousand dollars, and each is making the prevention of blindness one of its chief ends and reasons for being.

It became apparent with this multiplication of agencies working along similar lines and with like ends in view that there would soon be an overlapping of effort and waste of energy unless all of this work could in some way be coordinated. This possibility was emphasized by a letter which came in January last to Miss Louisa Lee Schuyler, chairman of the committee on prevention, and also a member of the Sage Foundation Trust, the woman to whom the success of this movement is largely due. Actively occupied as she is in the wise direction of a number of important charities, she still finds time for personal service in this one, the prevention of unnecessary blindness. This letter came from Mr. James P. Monroe, chairman of the Massachusetts Commission for the Blind. A portion of it reads as follows:

> "In view of the fact that this work is still in the experimental stage, that there is possible danger of its taking wrong directions, and that there is certain danger of unnecessary duplication of effort, it would seem to me very desirable to hold, at a comparatively early date, an informal conference, to which should be invited representatives from New York, Massachusetts, Ohio, Pennsylvania, Maryland, New Jersey and perhaps one or two other states. Such a round table conference would help, generously supported by the Sage Foundation, along lines that would be most effective and least liable to needless duplication. We fear, unless this movement for

prevention is kept in the controlling hands of those who have had experience, there is danger that it may be carried forward in an unwise way by amateurs."

The conference suggested was held in New York on February 16, and all of the states mentioned were represented except New Jersey. The presiding officer was Mr. John N. Glenn, director of the Russell Sage Foundation. A simple form of organization was effected and a committee appointed with authority to call other meetings as occasion might require.

The general sentiment expressed by representatives from all of the states was that success in the prevention of blindness was contingent on one word, cooperation, and the representatives from each of these states gave their hearty assurances of willingness to aid in a general movement on these lines.

It will be readily seen that the rapid development of this movement with its important lay associations soon made it evident that it could not be adequately managed by any ordinary medical committee. The effective work accomplished in one state may be utilized with great advantage in another; medical and lay committees can be brought together and a plan of campaign determined on. The literature used in one state can often serve as a basis for like publications in another. But such work to be successful would require the entire time of a capable trained man. Our necessities were, therefore, again presented with the certainty of a sympathetic hearing to the trustees of the Russell Sage Foundation and again an appropriation was made which made the appointment of such a man possible. The trustees have chosen for this work, Mr. Samuel E. Eliot, a graduate of Oxford and Columbia universities, a man especially endorsed and excellently trained for this important work. His services are offered to our committees wherever they may with advantage be employed.

So general and widespread has this movement become and so ready has been the recognition of the need of cooperation that the prevention of blindness has been chosen as one of the topics to be considered at the National Conference of Charities and Corrections to be held in this same city (St. Louis) in May, under the able chairmanship of Dr. Charles Emerson, now of Clifton Springs, formerly of Johns Hopkins University, Baltimore, and whose work in hospital social service in that city is so well and widely known. The paper will be read by Miss Carolyn C. Van Blarcom, the able secretary of the committee on prevention of the New York Association for the Blind. The theme will again be coordinated work and the appointment of a committee from this great organization will be requested.

Still further, with the broadening of the subject, the necessity of the interest and the influence of the educators of the country is evident. To lay the foundation for the development of this greater preventive work an address will be delivered before the National Educational Association at the meeting in Boston in July, on the Conservation of Vision and the Prevention of Blindness, and the aid of a special committee will be invited from that organization.

One of the most efficient agencies for the promulgation of this propaganda has been the Federation of Woman's Clubs and the Public Health Education Committee of this Association. This again affords an organization so complete that the entire country may be effectively and quickly covered.

It is evident from the foregoing that just now the conditions of time and circumstance present extraordinary opportunities for preventive work on ophthalmic lines with an all but universal readiness to aid in this movement. To be successful, however, it is essential that it be guided and directed by medical men.

The committee on ophthalmia neonatorum in each state makes an excellent nucleus for the development of this larger work which might be augmented by committees from the National Association of Charities and Corrections, the National Educational Association, the Committee on Public Education of this Association, the Confederation of Woman's Clubs and other allied organizations. These could accomplish ends which for any one of them alone would be impossible.

Your committee therefore recommends that this work be continued with its scope broadened and enlarged to comprehend in its largest sense the prevention of blindness.

Most respectfully submitted.

F. Park Lewis, Chairman.
J. Clifton Edgar.
F. F. Wesbrook.

On motion, the report was adopted and the committee continued.

The Chairman stated that he would be glad to consider a motion to limit the time of the reading of the reports.

Dr. C. R. Woodson, Missouri, moved that the reports be read by title or not exceed five minutes.

Seconded.

Dr. C. E. Cantrell, Texas, said 5 minutes is not sufficient time for making such reports.

Dr. Alexander R. Craig, Pennsylvania, moved to amend that the time limit be 10 minutes.

The amendment was seconded, accepted, and the original motion as amended was carried.

Dr. Henry O. Marcy, Massachusetts, Chairman, presented the report of the Committee on Davis Memorial.

On motion of Dr. A. P. McCormack, Kentucky, the report was referred to the Board of Trustees.

The report of the Committee on Nomenclature and Classification of Diseases, Dr. Frank P. Foster, New York, Chairman, was called for, and in the absence of Dr. Foster, Dr. Alexander R. Craig, Pennsylvania, moved that the report be read by title and referred to the Reference Committee on Miscellaneous Business.

In the absence of Dr. Walter B. Cannon, Massachusetts, Chairman, the report of the Council on Defense of Medical Research, on motion of Dr. A. P. McCormack, was referred to the Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, Chairman, read the report of the Committee on Patents and Trademarks.

Dr. Alexander R. Craig, Pennsylvania, moved the adoption of the report with its recommendations, and that the committee be discharged.

Seconded.

The report was discussed by Dr. C. S. N. Hallberg, Illinois, who moved that the report be referred back to the same committee for the purpose of considering the question of aspirin, to which reference was not made in the report of the committee.

Seconded.

Dr. E. J. Goodwin, Missouri, moved as a substitute that the report be referred to the Reference Committee on Legislation and Political Action.

Seconded.

The motions of Drs. Hallberg and Craig having been withdrawn, the President put the motion of Dr. Goodwin, which was carried, and the report was so referred.

Dr. Thomas McDavitt, Minnesota, Chairman, read the report of the Committee on Uniform Regulation of Membership.

It was moved and seconded that the report be referred to the Reference Committee on Amendments to the Constitution and By-laws.

Dr. W. H. Sanders, Alabama, stated that for a long time he has entertained and maintained some definite views with regard to the thorough and radical reconstruction of the Constitution of this Association, and not seeing any prospects of carrying out those views by participating in the work of this committee, he declined to serve on it, and now asked that his name be stricken from the committee. He has always believed that this Association ought to be an association of state organizations and not an association of individual physicians of the different states, and therefore if it is an association of state organizations, it should have no control over the affairs of county medical societies; that these matters should belong entirely to the state.

Dr. Alexander R. Craig, Pennsylvania, moved that Dr. Sanders be permitted to withdraw his name from the report of the committee.

This motion was seconded and carried, and the report of the committee was then referred to the Reference Committee on Amendments to the Constitution and By-Laws.

In reference to the report of the Committee on Elaboration of Principles of Ethics, the General Secretary read the following letter from the Chairman of this committee, Dr. Frederick C. Shattuck, Massachusetts:

Boston, Jan. 13, 1910.

Dr. George H. Simmons.

Dear Doctor:—After prelimin [illegible] and some interchange of views, the Committe[illegible] of the Principles of Ethics of the American [illegible] met in Atlantic City, June 9, 1909.

After full discussion, it was unanimously voted that it is not expedient to take any action at present. The Principles of Ethics are fairly well set forth by the Society now. This country is so large, and custom, as well as the conditions of life, vary so widely with the character of the communities, states and groups of states which comprise the country, that the committee believe it to be an impossible task for the American Medical Association to cover the whole ground and provide for anything like the variety of questions which arise and are bound to arise. The Association sets forth the general principles of ethics, and it seems to your committee far better to allow the individual state societies to provide for details in such way and as far as they may deem wise.

On motion of Dr. Edward Jackson, Colorado, the report was received and the committee discharged.

The report of the Committee on Revision of Pharmacopeia, Dr. Reid Hunt, District of Columbia, Chairman, was, on motion, referred to the Reference Committee on Miscellaneous Business without being read.

The report of the Committee on Anesthesia was read by the Chairman, Dr. James G. Mumford, Massachusetts.

Report of the Committee on Anesthesia

To the Members of the House of Delegates of the American Medical Association:

Your Committee on Anesthesia has the honor to submit the following report of progress:

This committee, appointed at the annual session in June, 1909, is properly the successor of the Anesthesia Commission of the Surgical Section, a Commission which existed during the years 1907, 1908 and 1909, and has now ceased its functions.

The present Committee on Anesthesia met in New York for organization on Oct. 29, 1909. Dr. J. G. Mumford of Boston, was elected chairman; Dr. Alexander Lambert of New York, vice-chairman, and Dr. H. A. Fowler of Washington, secretary.

Inasmuch as the committee had received no instructions from the Association regarding its purpose or method, the committee thought best to pursue its work somewhat after the fashion of the previously existing Commission of the Surgical Section. Accordingly, it has followed certain lines of research on anesthesia and anesthetics, devoting itself especially to four topics.

1. Research on the best anesthetic to use under varying morbid conditions.
2. Further investigation on the value of the various ethyl compounds as anesthetics.
3. Further investigation on the value of nitrous oxid as an anesthetic.
4. An investigation of the use of anesthetics in traumatic surgery, including military surgery.

Your committee met again on March 20, 1910, in New York, and again on June 6, 1910, in St. Louis. It reports in general terms progress, though it finds itself unable as yet to submit full and final reports for publication.

1. The research on the best anesthetic to use under varying morbid conditions has been confided to the direction of Dr. George W. Crile, of Cleveland, who, with his associates, has kindly consented to pursue the investigation, and has already made gratifying progress, some of which has been reported in current medical journals. Dr. Crile's work has been largely on the use of nitrous oxid, combined or not combined with morphin and scopolamin.

This investigator now informs the committee that he has employed nitrous oxid, combined with oxygen, in 1130 cases; that of these cases 1000 represent major operations; of these 1,000, 139 had nausea (9 severe nausea, and 4 of the 9 nausea lasting two or three days); in all the other 861 cases there was practically no nausea. When scopolamin and morphin were employed before the nitrous oxid and oxygen (759 cases) there was often a slight feeling of nausea during the recovery, and sometimes immediate vomiting.

Dr. Crile employed these forms of anesthetics (nitrous oxid and oxygen, with or without scopolamin and morphin) in his general routine work, and was satisfied that in the hands of highly skilled anesthetists the method is the best yet devised. This statement of Dr. Crile's is a supplement to a statement made by him in the *Southern Medical Journal* for January, 1910, in which he discusses the effects of ether on the vital forces and concludes (a) that it contributes to postanesthetic depression and (b) that it impairs immunity. These matters will be treated by the committee at length in its completed report, to be published later.

In connection with the subject of ether and immunity your committee will publish a paper also by Dr. Evarts A. Graham, of Chicago, whose important contribution reaches the committee through the courtesy of that investigator.

2. Further investigation on the value of the various ethyl compounds as anesthetics strengthens the conviction that these compounds are associated with a relatively high death rate; while the compounds themselves are not serviceable for prolonged anesthesia.

3. Further conclusions on the value of nitrous oxid as an anesthetic are summed up in a paper prepared by Dr. W. D. Haggard. His conclusions are essentially those already enumerated in Dr. Crile's contribution, the upshot of the investigation being that as a routine anesthetic nitrous oxid has a peculiar value, but that it must always and inevitably be administered by a highly trained specialist in anesthesia. Your committee cannot too strongly deprecate the routine use of nitrous oxid by general practitioners.

4. The committee has planned an extensive investigation of the uses of various anesthetics in military and traumatic surgery. This investigation is in the hands of Dr. H. A. Fowler, of Washington, who is assisted by Col. LaGarde, of the army, by Dr. Robert T. Miller, of Pittsburg, and by Dr. Gaston Torrance, of Birmingham, Ala. The committee thinks it unlikely that a satisfactory statement of the matters under this heading can be made before one, and possibly two, years to come.

In concluding this extremely brief statement of progress, the committee insists again on the wide distinction between anesthetics proper for use by general practitioners and anesthetics which may be employed by experts. As time goes on and wider knowledge accumulates, your committee feels more and more convinced that the distinction between these two classes of anesthetists is vital, and it repeats the statement in the report of the Commission on Anesthesia for the Surgical Section in 1908:

> 1. "That for the general practitioner, and for all anesthetists not specially skilled, ether must be the anesthetic of choice—ether administered by the open or the drop method.
>
> 2. "That the use of chloroform, particularly for the operations of minor surgery, be discouraged, unless it be given by an expert."

And your committee now adds the further recommendation, as already stated, that the use of nitrous oxid, whether combined with air or oxygen, and whether or not preceded by scopolamin and morphin, be confided invariably to the care of an expert.

J. G. MUMFORD, Chairman.
ALEXANDER LAMBERT.
W. D. HAGGARD.
H. A. FOWLER.
H. C. WOOD, JR.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was accepted, the committee continued, and referred to the Reference Committee on Miscellaneous Business.

Major M. W. Ireland, U. S. A., Chairman, read the report of the Committee on Selection of Insignia for A. M. A.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

Dr. Edward Jackson, Colorado, Chairman, presented the report of the Committee on Establishment of Physicians' Sanitarium.

Dr. A. T. McCormack, Kentucky, moved that, inasmuch as this report involves the appropriation of money, it be referred to the Board of Trustees.

The General Secretary read the report of the Committee on Monument to Civil War Surgeons.

Report of the Committee on Memorial to Medical Officers Who Died in the Civil War

To the Members of the House of Delegates of the American Medical Association:

By reference to the official minutes of the sixtieth annual session held at Atlantic City, N. J. (THE JOURNAL, June 19, 1909, p. 2077), it will be observed that the house adopted the favorable report of the Reference Committee on Reports of Officers in reference to the erection, in the national capital, of a memorial to the medical officers who gave up their lives during the Civil War.

Of the central committee of five authorized by the House of Delegates to be appointed by the president at that time, Drs. S. Weir Mitchell of Philadelphia, and G. Lane Taneyhill of Baltimore, have accepted appointment. These members, desiring to have a representative from the medical corps of the regular army on said committee, insisted on the appointment, by himself, of Col. William C. Gorgas as a suitable member. It has also been suggested that the two remaining positions be filled by the appointment of an available volunteer surgeon of the Union Army and a similar one from the Confederate Army. This step is now in progress of being consummated. By this method the central committee of five will be the better enabled to complete the general committee of one from each state, etc., as authorized by the House of Delegates.

Your committee confidently believes that the meritoriousness of the object contemplated strongly appeals to the sense of justice of this intelligent House, especially when we consider that it is "to commemorate men who fell in the service of *our* common humanity and who belonged to that great guild which no war can tear asunder."

Your committee respectfully recommends that it be continued, with the same privileges, instructions and appropriation authorized by the House at the Atlantic City meeting.

Respectfully submitted.

WILLIAM C. GORGAS.
S. WEIR MITCHELL.
G. LANE TANEYHILL.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was adopted with the recommendations contained therein approved, and the committee continued.

Under the head of "New Business," Dr. Alexander R. Craig presented a petition to the House of Delegates which contemplates the formation of a new section, to be known as Section on Physical Forces in Medicine, and moved that the petition be referred to the Reference Committee on Section and Section Work.

Dr. E. Carson Hay, Hot Springs, Ark., presented a petition for the creation of a new section on Urology and Venereal Diseases, saying that 130 or 140 names were appended to the petition.

Dr. Hugh Young, Maryland, moved that it be referred to the Reference Committee on Sections and Section Work.

Seconded and carried.

Dr. W. H. Sanders, Alabama, presented the following resolutions, adopted by the Medical Association of the State of Alabama at its meeting, held in Mobile, April 19-22, 1910:

WHEREAS, Efforts are now being made to provide by Congressional enactment for the establishment of a National Public Health Organization; therefore, be it

1. *Resolved*, By the Medical Association of the State of Alabama, that in providing for such an organization, it is the sense of this body that the principles of the Constitution involving the exercise of the police power, as announced in a long line of decisions of the Supreme Court of the United States, should be rigidly adhered to.

2. That any organization for the exercise of Public Health Functions that may be established should be widely and effectually divorced from politics, to the end that all persons who may occupy official positions therein should be selected on the basis of their qualifications as sanitarians and their administrative ability, and not on party affiliation.

3. That the proposed organization should sustain some direct and organic relation to the medical profession of the several states as organized and chartered for public health purposes.

4. That a copy of these resolutions be transmitted to the Senators and Representatives in Congress from this state, and to the American Medical Association at its next meeting.

The President stated that unless there was some objection, these resolutions would be referred to the Reference Committee on Legislation and Political Action, and as there was none, the resolutions were so referred.

Dr. Sanders also presented another set of resolutions which were adopted by the Medical Association of the State of Alabama at its meeting, held in Mobile, April 19-22, 1910:

WHEREAS, A committee was appointed at the last meeting of the American Medical Association to reconstruct and rewrite the Constitution and by-laws of that body, and to investigate and report on other matters connected with the organization of said body; and

WHEREAS, It is expected that said committee will report the results of its work at the forthcoming meeting of the American Medical Association; therefore, be it

Resolved, By the Medical Association of the State of Alabama, that the delegates of this Association to the next meeting of the American Medical Association be, and they are hereby, instructed to insist on the incorporation into any new constitution that may be adopted by the American Medical Association of the following principles:

1. That the fundamental and important principles of organization be embodied in the constitution, and that the principles of secondary importance and the details of organization be embodied in the by-laws, the reverse being largely the rule in the present constitution and by-laws of the American Medical Association.

2. That in providing for the offices of the Association, the principles should be laid down that no person should at the same time fill two official positions.

3. That a charter for the American Medical Association be obtained from the United States Government, should it be acertained that the right to grant such a charter resides in the Congress of the United States.

4. That whether a charter for the American Medical Association be obtained from the United States Government, or from a state government, it should incorporate the American Medical Association as a body and not the Trustees thereof, as is the case under the existing charter.

On motion, these resolutions were referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Samuel Wolfe, Pennsylvania, presented the following resolutions:

Resolved, That the House of Delegates hereby specially endorses and approves the statistical and editorial work of THE JOURNAL of the American Medical Association in reference to the fatalities and casualties resulting from the present methods of celebrating the Fourth of July, now carried on over a period of more than seven years, and recognizes in it the main factor in the crystallization of sentiment and the chief incentive to the activity so apparent within the last few years.

Resolved, further, That we urge the continued and additional cooperation in this important field of the newspaper and magazine press of the country, of all municipalities, of civic, religious and [illegible] of all public-spirited men and women, and [illegible] nized way of all state and county medical societies.

On motion, the resolutions were referred to the Reference Committee on Hygiene and Public Health.

Dr. Joseph A. Capps, Illinois, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work:

WHEREAS, By reason of the vast strides that are being made in Pathology, Bacteriology, Urinology, Serum and Vaccine Therapy, and the development of the various scientific aids to diagnosis, and because the facilities for making use of these many agencies in the cure of disease are costly and complicated; and further, because they demand skill and education of a highly technical order for their successful use, hospitals in which these scientific instruments can be concentrated and employed are becoming more and more a necessity for the treatment of the poor, but for every class of society. It is not necessary in this modern day that hospitals shall nurse and feed the sick; they must at the same time take scientific care of patients under the modern practitioner's directions. To do this, it is necessary to have scientific men, specially trained, in charge of modern hospitals; and that these hospital administrators shall study the problems of the medical profession in conjunction with the practitioners whom they must aid. Recognizing these necessities, the House of Delegates of the American Medical Association therefore

Resolved, That there is hereby created a section of the Association to be known as the hospital section.

Dr. Luther M. Halsey, New Jersey, stated that at the last session of the House of Delegates of the American Medical Association, held at Atlantic City, N. J., a resolution was introduced asking that the Committee on Scientific Exhibit be published in THE JOURNAL along with the other committees. This was done at the request of Dr. Wynn. A great deal of confusion had arisen because the Committee on Scientific Exhibit was not published in THE JOURNAL, and Dr. Wynn had received many letters from different parts of the country asking the name of the chairman on Scientific Exhibit. He therefore moved that this matter be referred to the proper committee. He would suggest, further, that the whole matter of arranging for the Scientific Exhibit be placed in the hands of Dr. Wynn, with power to act, rather than be entrusted to the local committee.

The President stated that unless there was objection, this matter would be referred to the Board of Trustees, and as there was none, it was so referred.

On motion, the House of Delegates adjourned until 2 p. m. Tuesday.

(*To be continued*)

Opening General Meeting

Tuesday, June 7, 10:30 A. M.

The general opening meeting of the Sixty-First Annual Session of the American Medical Association was held at the Odeon Theater, Tuesday, June 7, 1910, at 10:30 a. m. The meeting was called to order by President William C. Gorgas, of Panama.

Prayer was offered by the Rev. Charles S. Mills, D.D., St. Louis.

Address of Welcome

The President introduced Dr. Henry Schwartz, President of the St. Louis Medical Society, who delivered the address of welcome:

Mr. President, Ladies and Gentlemen: On behalf of the St. Louis Medical Society I extend to the officers and members of the American Medical Association, to their families and to their guests, a most hearty welcome. The St. Louis Medical Society appreciates the honor you have conferred on it by convening in St. Louis. It likewise appreciates the help and the encouragement which your coming here gives to the work of the organized medical profession of this city. Your influence has already helped us in our efforts to unite all reputable practitioners in one harmonious fellowship. We expect still greater benefit from this convention because our fellow citizens will learn that the St. Louis medical profession is an integral part of the great American Medical Association. They will learn what a mighty factor that Association is in promoting the science and art of medicine, in elevating the standard of medical education, in securing and enforcing just medical laws, and in enlightening and directing public opinion in regard to the broad problems of hygiene. Such information will cause the citizens of this great commonwealth to rally around its medical profession and to assist it by every effort to do its full share of this great and patriotic work.

Your program for this convention shows what an immense amount of work will be done in the next few days, and we sincerely trust you will be able to mix your work with recreation in such a way as to live up to that part of the constitution which pledges us to promote friendly intercourse among

American physicians. We have lived in joyful expectancy of your visit, and now you are with us, every member of the St. Louis Medical Society stands ready to grasp you by both hands and shout from the bottom of his heart, welcome! welcome! welcome!

Address of Welcome on Behalf of the Medical Profession of Missouri

Dr. Herman E. Pearse, Kansas City, president of the Missouri State Medical Society, was then introduced and delivered an address of welcome:

Mr. President, Ladies and Gentlemen: We are a great and growing state here in Missouri; we have a great and growing profession, and we recognize you as the greatest and strongest body that we have in this country; we welcome you here for the good that you can do to the people that we have been working for. If you work as hard in the next five days as we have here in the last ten years, this speech of welcome will be followed by a speech of gratitude which will require a better talker than I to do it justice.

We welcome you here to-day, to help us in the battle that is being fought in the United States for the freedom of its people. We see you come with every influence in the United States that is opposed to the public health movements skulking at your heels and flanks and proclaiming its attacks in every daily paper. The "pure food law" is making unprofitable the business of every quack doctor, and every one who has fattened on the misfortunes of the poor and on the credulity of the ignorant, and we welcome you to the four or five days' battle here. In this connection I am reminded of what one of our famous generals said, who when little reenforcements came to him for duty: "Wade right in, gentlemen, you will find elegant fighting all along the line."

Address of Welcome on Behalf of the Medical Profession of St. Louis

Dr. W. G. Moore, St. Louis: *Mr. President, Ladies and Gentlemen:* I am aware that five minutes has been allowed for what we have to say. I wish it were longer for myself, but for your sake I am glad it is no longer. I realize that no pleasanter duty could have been given me than to welcome you to this city.

I believe that this Association has in its present and in its incoming President two of the greatest and most useful men within the borders of the United States. Their usefulness goes out like the sunshine on the just and the unjust. And the Governor is here honoring himself in honoring you. He is ready to extend a full and free pardon for any sins of omission or commission that may be committed within the borders of Missouri during the next four days. The Mayor is likewise here to present to you not only the key to the great outer gate, which admits you to our warmest hospitality, but also a bunch of keys which unlocks every door and admits to the treasures or pleasures under his control. I am here, gentlemen, to speak to you a word for the great militant body of the St. Louis profession—a body of men than whom you will not find more noble, efficient or loyal, the maledictions of the Carnegie articles to the contrary notwithstanding. You will find among them royal companions. You will find among them also men capable of filling the highest offices in your gift with credit to themselves and to you.

Many long years have passed since you were our guests, entirely too long for our hospitality, which fact we hope to prove to you before our deliberations come to a close. The North, East, South and West are equidistant from this convention city. I recognize before me the greatest body of men that can be gathered together in America, and I mean that as fully as I am capable of meaning anything. Judged from the standpoint of pure philanthropy and the possibilities of the greatest good to the greatest number of our fellow citizens, there comes from the city of New York the cheery information that you are a trust—the informer is one B. O. Flower, the president of the "National League for Medical Freedom" and the editor of the *Twentieth Century Magazine*. Flower has caused to be printed in our daily papers the following questions in "scare" headlines:

"Do you want government by political doctors?"

And I answer: "We do!"

"Do you want health and hygiene to be represented by an army of United States Inspectors under the direction of a Medical Bureau?"

And I answer, that this is a consummation devoutly to be wished.

He asks if we know that William H. Welch, president of the American Medical Association, told the Senate Committee on Public Health and National Quarantine, that physicians wanted such a National Department of Public Health for the purpose of influencing state and municipal boards of health, and that he felt the Constitution could be so interpreted as to give the national board the power to regulate health affairs, nationally. We did not know this, but if it is true, it affords us another opportunity to hurrah for Welch and to applaud him.

If the American Medical Association be a trust, it furnishes a part of what our political brethren have sometimes said—that there is such a thing as a good trust—a statement which I never believed before.

This is a trust concerning which we may say that about 20 or 40 per cent. of its earned increment goes to sweet charity; a trust whose every discovery or invention is for the benefit of the sufferers of our race and becomes the property of prince and pauper alike; a trust whose efforts redound to the uplift of mankind and which constantly limits its own sources of income, by diminishing the ills that flesh is heir to.

If it be a sin to decry such a trust, then I glory in the companionship of such sinners. The medical profession has never asked for a law that was not beneficent in its intent, and if it is true and loyal to its traditions, it never will. Let us differ as we may and will about different questions, when it comes to the enactment of laws for the benefit of the people, we band ourselves together and throw our whole strength on righteousness and weary not in well-doing. All hail, then, to the honorable Senator Owen of Oklahoma, who has become the advocate of the creation of a national Department of Public Health, and of a position in the Cabinet of the President, at Washington, which we should have had from the beginning of the Government. Let us see to it in the future that all positions of this character are held by medical men in municipal, state and national governments, who are fully qualified to fulfil their duties without regard for politics, and so long as they continue to discharge those duties successfully, they should not be removed for mere political expediency. It is not fair that men who are willing to devote their lives to the sick in body and mind should be treated in such a manner.

There are no strangers within our gates; not even those brave men who have journeyed to us from across the seas, to mingle their efforts with our own that the suffering of humanity may be lessened and that the world as an abiding-place may be made better.

Address by Governor Hadley

Hon. Herbert S. Hadley, Governor of Missouri: *Mr. President, Ladies and Gentlemen:* I am very glad indeed, as the chief executive of the great State of Missouri, to extend to the members of the American Medical Association a cordial welcome within the confines of this state. I not only welcome you here to our soil, but I welcome you to our splendid Italian—or Siberian—climate. It is a distinct pleasure, this morning, to be with so many learned members of the medical profession. It is so often that we lawyers have the medical profession with us, that it is a privilege for us to turn the tables, and we enjoy not only the sense of pleasure, but a sense of security on an occasion such as this, when we laymen realize that there is no danger of anybody dying without medical assistance.

I do not know whether I am in the right place, or not. The remarks of the last speaker seem to indicate that there is some question as to whether the American Medical Association is a trust, or not. I consider myself sufficiently expert on the subject of trusts, however, to say that this trust is welcome and thrice welcome within the confines of the State of Missouri. I only hope that this trust, which I here now diagnose with complete confidence, as a good one, at the able direction of its incoming president, Dr. Welch, can assist in doing for the United States of America, what the medical profession, under its outgoing President, Dr. Gorgas, with the assistance of the United States Army, has done for the Canal Zone.

I am glad to know that you members of the medical profession not only believe in something besides making money and keeping out of jail, but that you are also willing to fight for your belief; and if the other professions of this country—particularly my own—are to continue to rank among yours in respectability and public confidence, it must enjoy the distinguished pleasure of imitating your example.

I trust that the sessions and deliberations of this Association will be of benefit to the people of this state. As has been well said, there can be gathered together no body of men whose deliberations would excite more general interest than the members of this profession. Your work has to do not only with the problem of human weakness and human disease, but it has to do with the overpowering problem of human existence itself. Twice in the life of each of us we require the services of a physician, and your capacity for usefulness is not limited to the relief of human weakness and disease. Your work has not only contributed to the advancement of civilization, but it has increased the duration of life and added to the capacity of man for healthful and proper enjoyment.

Sometimes, in your efforts to make progress and to acknowledge error, doubt is aroused and suspicion raised in the minds of the layman as to the science of your profession itself; when we find one year a certain method of treatment of disease is abandoned and a radically different method adopted, the cry is apt to be raised, that, after all, the practice of medicine is but an intelligent system of empiricism, and that we are taking long chances when we summon a medical man to help us in distress. To my mind, that is one of the most hopeful indications of progress that unfortunately is not imitated by all of the learned professions. The advancement of the medical profession along scientific lines constitutes one of the great achievements and triumphs of this wonderfully progressive age.

It may be, however, that we are moving in cycles, because it is unquestionably true, that much that you do to-day has been done in the past and then has been forgotten. I find that many of the instruments with which you surgeons perform your most delicate and scientific operations have been discovered in the ruins of antiquity—indicating that these operations were unquestionably known to, and performed by, the ancients. But, however that may be, it is a far cry from the herbs and incantations of the medicine-man of the savages to the asepsis of the operating-room and the antitoxins of the scientific medical man of to-day. And the work you have accomplished along that line, although it may seem at times to cause public distrust or lack of confidence, is simply, in my judgment an indication of the feverish anxiety that you have to move faster to the consummation, which I am confident, you will eventually reach when you find an antitoxin for every disease that is known to the human system.

I have heard a story from one of the leading medical men of this country, told with anguish of spirit, as to how he lost a splendid boy from diphtheria, because physicians, although they had discovered the antitoxin of that disease, had not yet learned the science of its administration. But no one can stand by the bedside of a child, watching it clutch its mouth and throat in its fight for air, and see the wonderful effects of the administration of antitoxin against diphtheria, without taking off his hat in gratitude and respect to the scientific medical man for this wonderful contribution to the development of medical science.

Truth never seems so simple as when it has been scientifically ascertained and announced; and after many of these things you medical men discover and tell us about, we wonder that you did not discover them and tell us about them many years ago. Nobody of intelligence to-day questions the germ theory of disease, and yet that theory was scientifically ascertained and definitely announced within my own lifetime. To-day the medical profession knows accurately the habits and all the characteristics of the germ of tuberculosis. We are simply grateful to you for having done so much, and that you have taught the individual how he may substitute himself in the manufacture of vaccines from his own person and prosecute this work of segregation for himself.

But your activities as a profession, fortunately, have not been confined to these professional investigations and discoveries that have to do with the treatment of special diseases. I undertake to say that your work along the lines of preventive medicine and of movements for the improvement of the public health are, more than any others, the reasons why the medical profession holds—as it does hold to-day—its deservedly high rank in public estimation and esteem, and the work and the future usefulness and development of the medical profession, in my judgment, will lie not so much in curing or in making sick people well, as it will in preventing well people from becoming sick. Along the line of correction of those conditions which result in the impairment of public health, medical men and the public official have come in contact and the public official who is performing his duties with the sense of proper obligations has found in the medical man not only a willing, but an effective coadjutor for the accomplishment of proper results. And I undertake to say that the time is not far distant when the American people will recognize the inconsistency—if not absurdity—of spending millions of dollars each year for the protection of our cattle and our sheep and our hogs from the ravages of disease, and spending but a few paltry dollars for the protection of our women and men and children.

I am glad to welcome you to the confines of this splendid commonwealth this morning, because public sentiment of this state has been in accord with the work of the advanced and progressive members of your profession. Up to the last session of the state legislature we had only a State Board of Health, with limited powers for the accomplishment of those measures of possibility that always lie within the work of such a board. By that legislature there was enacted a law establishing in this state a Bureau of Vital Statistics and giving new powers to the State Board of Health for the accomplishment of the proper measures of usefulness.

That Bureau of Vital Statistics has been in operation for three months or more, and during that time statistics have been kept and recorded, and I am glad to say this is an indication of the effectiveness of the medical profession in a certain class of cases, namely, the births numbered 16,000, while the deaths were only a little over 12,000. So, you see, here in Missouri we are both the opponents of race suicide and believe in the principle of the "full baby-buggy."

Further than this, I have taken the position that the State Board of Health should be composed of men who are interested in one of two lines of medical work. As I have the appointment of that board, I have a right to be discriminating, and that board must be composed of physicians who have been interested either in the improvement of medical education or in the protection of the public health. I have appointed, and I intend to appoint, on that board only members who receive the endorsement or recommendation of the State Medical Association.

I do not disregard or hold in light esteem the work of those investigators and, perhaps, I might say reformers, who are undertaking to improve the conditions of our public charities and our penal and reformatory institutions, when standing before this audience of medical men; and I feel it would not be improper for me to repeat what I said, when standing before a convention composed of workers along these lines of public charities, that I have received from no department of government so much sane, practical and effective assistance in the correction of conditions in our eleemosynary and penal institutions as I have received since I have been Governor of Missouri from the inspections and recommendations of the State Board of Health. In the work of improving the Missouri penitentiary we have succeeded in changing it from one of the worst penitentiaries in the country to one of the best, and in so doing I have received valuable aid from the inspections and the suggestions for improvement that have been given me by the members of the State Board of Health.

I understand, Mr. President, that the time of these speeches is limited to five minutes. I have some time yet allotted to me, and there is one other thought I must give expression to before my time is expired, and that is this: You, as a profession, are able to put your own houses in order. You have cleaned up your own Augean stables by driving from your ranks the quacks and abortionists and the charlatans and the impostors. I want to say to you that the State Board of Health in the State of Missouri has been actively on the firing-line, fighting a battle for a clean profession against the elements which foster disgrace and dishonor. In that regard I can say again, to the other profession, the legal profession, if it is to continue in public confidence and approval, it must follow your example, because we have in our ranks quacks and abortionists and charlatans and impostors in our pettifoggers and shysters and ambulance-chasers, and a certain class of lawyers who are all the more disreputable because, with greater capacity for injury in our legislative and judicial lobbyists, in eminent lawyers who, in order to screen rich clients, violate the law and bring the legal profession into disrepute, securing for them immunity.

I trust that in the general beneficial influence that will come from the deliberations of this convention there may percolate down or gravitate up to the legal profession something of that spirit of modern medicine which demands that the learned professions shall also be kept clean.

In conclusion, we welcome you here with interest and enthusiasm. I welcome you not only as the Governor of this State, but also as the Mayor of St. Louis. They go through the ceremony, every four years, of electing a Mayor here [laughter], but I happen to appoint the police power, and therefore I want to say to you, in conclusion, that the immunity that has already been extended to you by Dr. Moore was not a sounding brass or tinkling cymbal. We welcome you with pleasure, not only to our city, but also to our homes and to our hearts.

Address of Mayor Kreisman

HON. H. KREISMAN, Mayor of St. Louis: *Mr. President, Ladies and Gentlemen:* There remains but little for the Mayor of St. Louis to say in extending to you a welcome this bright spring morning. Governor Hadley has truthfully said that he confers by his authority and high office every immunity on you while in St. Louis. We hope that you may have a pleasant stay with us, as our hearts and our homes are open to you, and, my friends, may we have you with us more frequently than during the years that have passed since your last coming. I thank you.

Report of the Local Committee of Arrangements

Dr. W. B. Dorsett, the Chairman, made a brief report of the local committee of arrangements. He announced the places of meeting of the various Sections, the entertainments, the alumni dinners, etc.

The retiring President, Dr. Gorgas, introduced the President-elect, Dr. William H. Welch, who delivered his presidential address, which will appear in THE JOURNAL of June 18.

Society Proceedings

COMING MEETINGS

Maine Medical Association, Bar Harbor, June 29-30.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

ARKANSAS MEDICAL SOCIETY

Thirty-fourth Annual Session, held at Little Rock, May 3-6, 1910

The President, DR. J. H. LENOW, Little Rock, in the Chair

Officers Elected

The following officers were elected for the ensuing year: President, Dr. R. C. Dorr, Batesville; vice-presidents, L. F. Magee, Frostville; J. B. Grammar, Swarcy; and Thad Cothran, Walcott; secretary, Morgan Smith, Little Rock (reelected); treasurer, J. S. Wood, Hot Springs, Pine Bluff (reelected); editor, C. P. Meriwether, Little Rock (reelected); delegates to American Medical Association, J. T. Clegg, Siloam Springs; E. C. Hay, Hot Springs; alternates, B. Hatchett, Fort Smith; L. H. Barry, Hot Springs; councilors, H. R. McCarroll, Walnut Ridge; J. H. Kennerley, Batesville; S. A. Southall, Lonoke; A. D. Knott, Wilmot; H. H. Niehuss, Wesson; L. J. Kosminsky, Texarkana; J. C. Wallis, Arkadelphia; A. H. McKinzie, Dardanelle; C. T. Cannaday, Marshall; and M. S. Dibrell, Van Buren.

The next place of meeting will be Fort Smith, May, 1911.

President's Address: The Progress of Medicine

DR. J. H. LENOW, Little Rock, spoke of the flourishing condition of the society; referred to the early history of the organization, the difficulties met in its early life, and praised the indefatigable, unselfish labors of the pioneers. Their unity of purpose was the highest exemplification of professional ideals; they laid the solid foundation on which present component societies securely rest. He predicted that ere long public health in all the states would be under control and direction of non-political health commissions, selected for skill and executive ability. Closer relations between laity and the profession are foreshadowed by trend of times; together they would make common cause of promotion of measures to combat ravages of disease, and inauguration of a militant plan of leading the public out of sanitary and hygienic ignorance. He predicted a great and glorious future for preventive medicine.

The future honor and dignity of medicine, he said, rested on the thorough training of its votaries, higher standards of medical education and an elastic curriculum. The great need of a thoroughly equipped Board of Health and Bureau of Vital Statistics was referred to with the hope that the near future would bring about its consummation.

The triumphs of medicine are the result of laboratory investigations, and the antivivisectionists are cruelly ignorant of the benefactions conferred on humanity by the discoveries of Pasteur, Lister, Koch, Behring, Flexner, Stiles and Carrel.

It is the duty of the profession to take the public into its confidence and meet the false statements with the unvarnished truths, to open up bureaus of official information available to the public and to educate them in advance of any attempt to limit the freedom of scientific research with legislative restrictions.

Tuberculosis Campaign

A fund of $500 was appropriated as a contribution to the campaign against tuberculosis, to aid in establishing a traveling display and competent instruction from time to time.

Dysentery in Infants

DR. F. T. ISBELL cited as fruitful sources of infection, water, milk, raw fruits and vegetables—malnutrition resulting from improper feeding. Treatment: diet, hygiene, medication, rectal irrigation with bismuth in mucilage of acacia; high and low irrigation with hot normal salt solution.

Infant Mortality

DR. J. T. CLEGG, Siloam Springs: Deaths in infancy up to five years of age exceed the combined mortality from tuberculosis, typhoid and other epidemics; 5,000 infants die to one adult alcoholic mortality. I believe this to be due to heredity, accidents and injuries, improper feeding and lack of hygienic care. The laity should be admonished as to general sanitation and urgent need of wholesome feeding. Nine-tenths of babies are bottle fed. There should be rigid inhibition of fruits, cakes, candies, pastries, and especially strawberries and vegetables grown in contact with soil. Malted milk, infant foods and other so-called substitutes for mother's milk should be condemned. Most satisfactory results are obtained from modified cow's milk.

Acute Otitis Media and Mastoid Abscesses

DR. ROBERT CALDWELL, Little Rock: Predisposing causes are adenoids and hypertrophied tonsils, colds, fevers, diphtheria and other infections. Early paracentesis, irrigation and mastoid operation, if indicated, are the treatment. Extraordinary care is to be exercised in its execution.

Empyema

DR. D. E. BRODERICK, Kansas City: Many children succumb to undiscovered empyemata; more frequently primary than is generally believed. Empyema of newborn is generally due to streptococci; frequently it is a sequel to pneumonia. The onset may be acute or insidious; it is often mistaken for abdominal disease; all hectic temperatures should excite suspicion; sweating and diarrhea may be present. Percussion is a most valuable asset in examination. Forcible percussion is useless; dulness is stationary and not due to position; auscultation is often fallacious. The coin sound is corroborative only; vocal resonance is often ambiguous. Diagnostic difficulties are often very great. Basic diseases are often most puzzling of interpretation by physical methods. Exploratory thoracotomy should be done to clear up the massive signs in chest. Fibrotic lung is often revealed; pneumatic cabinets aid materially. Empyemata of nurslings are often revealed at postmortem. Goodhart's classification is helpful. Prognosis is good in pneumococcal form. Blood picture and *x*-ray and exploratory thoracotomy are paramount in differentiating empyema and pneumonia; strict attention should be given to apical displacements.

Infantile Scorbutus

DR. H. N. STREET, Argenta, condemned canned goods, artificial baby foods and boiled milk. Treatment, he said, consists of administration of orange juice, raw meat juice, unboiled milk, fresh air and sunshine.

Wassermann Reaction

Dr. M. F. Mount, Hot Springs, gave the diagnostic value in 150 cases of suspected syphilis; 40 positive and 110 negative. Technic employed was the same as originally published by Wassermann, with the exception that he used guinea-pig heart antigen instead of syphilitic liver extract. Tests were made in each case with known positive control and known negative control; clinical history of patients unknown. Positive Wassermann reaction means syphilis; active mercurial treatment indicated. Negative means that for the time being treatment is not needed. Patient having had clinical syphilis should have test made frequently over long period of time.

Intramuscular Injections of Mercury

Dr. Eugene C. Hay, Hot Springs: This is a very effective and very popular method. I use grey oil, a modification of Lang's formula (mercury and non-sterilized wool fat), beechwood creosote, camphoric acid and glycerin). Results are most gratifying. The bad results of various clinicians are due to faulty technic. I prefer inunctions as a regular routine and use grey oil only when inunction method fails; in some very stubborn cases I use injections supplemental to inunction with excellent results.

Brain Syphilis

Dr. James H. Chesnutt, Hot Springs: Predisposing causes are trauma, violent strain, mental excitement and alcohol. Symptoms—headache, nausea, vomiting, convulsions, gradual dementia, forgetfulness, complete loss of memory, apathy, delirium, coma and violent insanity; ocular palsy; ptosis; double vision, optic neuritis, blindness. Prognosis is hopeful, and response to treatment may be expected so long as specific changes are present and narrowing of the vessels and atrophy of the brain tissue lacking. However, if one cranial nerve is paralyzed for a year, there is very little hope of recovery from paralysis.

Erythromelalgia

Dr. James H. Chesnutt, Hot Springs, has secured some favorable results from treatment by hydrotherapy, acetosalicylic acid, iron, quinin and strychnin and thyroid extract.

Postanesthetic Acidosis

Dr. J. G. Eberle, Fort Smith: Starving before and underfeeding after anesthesia are exciting causes. I give large amounts of glucose by proctoclysis and hypodermoclysis, and resort to purgation, diaphoresis, enemata of normal salt solution and sodium bicarbonate.

Quinin Anesthesia

Dr. Henry Thibault, Scott: All soluble salts of quinin possess anesthetic properties, but I prefer quinin bisulphate. For inflamed tissues I use quinin and urea bihydrochlorid, as described in The Journal A. M. A., Aug. 8, 1908, April 23, 1910, Oct. 23, 1909.

Preventable Blindness

Dr. John G. Watkins, Little Rock: Out of 193 patients at a state institution, 131 had slight vision, 62 were totally blind, 3 from ophthalmia neonatorum, 36 from trachoma, 23 from various causes. Treatment: Atropin, with insufflations of calomel, nitrate of silver, copper sulphate; hot fomentations for pannus.

Health Conditions in the Delta of the Mississippi Valley

Dr. Vernon MacCammon, Arkansas City: Artesian wells cause great improvement in health conditions. Pure water may be found at a depth of 550 feet. Pernicious malaria is now very rare. Fatal cases are usually due to home treatment with chill tonics. Typhoid fever is rare and generally mild. Drainage and general sanitation and inhibition of use of surface water contribute to general welfare. Pneumonia is rare and hookworm unknown. Soil is black loam, which is unfavorable to the development of uncinariasis.

Severe Prolapse of Uterus, Modern Methods of Treatment

Dr. H. S. Crossen, St. Louis: The old-style hysterectomy should be condemned. The inter-position method is indicated, a modification of the vagino-fixation method of Mackenrodt. For non-operative cases I prefer Gehrung's pessary; second choice is Menge's.

Treatment of Pelvic Cellulitis in the Female

Dr. R. C. Dorr, Batesville: I favor the semilunar incision per vaginam in posterior cul-de-sac under local anesthesia, with insertion of gauze drainage. Palliative treatment comprises administration of salines, hot douches, and either hot or cold applications over abdomen, which ever contributes most to the patient's comfort.

Management of Hookworm

Dr. A. E. Cox, Helena, treated a family of five two years for anemia, using iron, arsenic, nux vomica, etc., without improvement. Condition was relieved by beta-naphthol and castor oil.

Proceedings of House of Delegates

Among the actions taken by the House of Delegates were the following:

Endorsement was given to the Owen bill for a department of health; to the establishment of a Pasteur institute in Arkansas; and to Dr. Wiley's opposition to benzoate of soda as a food preservative.

The delegates to the American Medical Association were instructed to endeavor to secure a new section on the subject of genitourinary diseases and syphilis.

Laws were advocated to require the registration of births and deaths, and better care of insane persons; and to exempt from prosecution a woman testifying against the physician who induced an abortion on her.

The committee on consolidation of medical schools in Little Rock reported favorable progress and stated that the outlook was hopeful for consummation during the present year. The House of Delegates endorsed the proposition of the Medical Department of the University of Arkansas to turn over to the state its grounds, buildings, outfit, money, etc., in order that it might be made a state institution and managed by a non-partisan board.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Continued from page 1814)

The Use of Vaccines in Septic and Inflammatory Conditions

Dr. E. W. Cushing, Boston: Vaccines, or killed cultures, act by increasing the resistance of the patient. The opsonic index practically is not of much use in acute conditions. Autogenous vaccines are preferable to stock vaccines, except in certain cases of staphylococcus infection. The best results are obtained in the following order: infection from colon bacillus, pneumococcus, staphylococcus. The results are not satisfactory with streptococcus in rapid virulent infections. In chronic infections and in cases of little virulence streptococcus vaccines give satisfactory results, especially in moderate puerperal cases. Vaccines are not successful in acute gonorrheal infections, but are of much service in gonorrheal arthritis. Vaccines are useful in the following conditions: puerperal infections, abortions, infections of bladder and kidneys, appendicitis, abdominal operations, post-operative pneumonia, and abdominal fistula.

Surgical Treatment of Puerperal Septic Infection

Dr. E. E. Montgomery, Philadelphia: The most effective safeguard against the baneful influences of sepsis is the practice of such measures during the parturition and puerperium as will lessen the opportunities for its production. The suspicion of sepsis confirmed, the course of the surgeon must very often still be a tentative one and largely dependent on the period at which the patient comes under observation. Rarely after the diagnosis is definitely determined is it worth while to resort to the use of the curette. The infective germs rapidly pass beyond the superficial structures, so that curetting is ineffective to limit the progress. The removal of the uterus would not always be adequate, so operative procedure should be delayed until it is evident that there exists such a localization as shall make operation effectual in arresting further baneful progress. The results of serotherapy are not always so satisfactory, as not infrequently its employment has been begun too late, or the virulence of the infection is so marked that the best result to be obtained will be a local manifestation of the poison which will still require resort to the knife for the safety of the patient. Extensive peritoneal exudate entirely surrounding the uterus and fixing it and the appendages may be entirely absorbed and the patient restored with functionating organs by rest, regulation of the diet, moderate depletion, and the judicious use of improvised carbonic-acid baths. The constant course of the surgeon should be one of watchfulness, utilizing every force at his command, to conserve the functions of the patient, yet to proceed unhesitatingly to the most radical measures when such seem necessary to the preservation of life.

When Shall We Operate in Puerperal Sepsis?

Dr. John Osborn Polak, Brooklyn, N. Y. read a paper with this title. based on a study of 200 consecutive cases, in which he drew the following conclusions:

1. Each case of post-partum or post-abortal infection must be studied individually, and an accurate diagnosis must be made on the clinical, bacteriologic and blood findings, before any treatment is instituted.

2. Nature is competent in the majority of instances to localize and circumscribe the infection.

3. Curettage, douches and examinations during the acute stage break down barriers and open avenues for the further dissemination of sepsis to the myometrium, parametrium and adjacent tissues, and the danger from curettage increases with each month of pregnancy.

4. Enormous pelvic and abdominal exudates may disappear without operation, and that in time enlarged ovaries, tubes, etc., may assume their proper size and function; and further, that so long as the patient's general condition improves, no surgery is advisable.

5. All operations are attended with less risk after the acute stage of the infection has subsided, and that an exact diagnosis is more easily made at this time.

6. After the uterus is thoroughly emptied, the pelvis should be left absolutely alone, and that we should make every effort to support the patient and increase her natural blood resistance.

7. Extraperitoneal drainage of local foci should be elected when possible, either by incision just above Poupart's ligament, or by posterior vaginal section, and when this is impossible, because of an inability to determine the exact anatomic relations of the local foci, an exploratory laparotomy is justifiable in order to make an exact diagnosis and determine on the safest route for drainage.

8. Operative interference in the acute stage of sepsis is only indicated in general purulent peritonitis, post-abortal pelvic peritonitis, infected tumors in or near the genital tract and uterine rupture, when the rupture has occurred in the course of labor and has been handled outside of a well-managed maternity.

9. Thrombophlebitis is a conservative process on the part of Nature to limit the infection, and any form of pelvic manipulation only tends to break down and separate parts of these thrombi, extending the infection to the more remote parts, thus jeopardizing the patient's life.

Surgical Treatment of Puerperal Septic Infection

Dr. H. N. Vineberg, New York: Surgical intervention, if curettage be not included, comes into consideration in only a small percentage of cases of puerperal sepsis. The selection of these is difficult for want of reliable guides, bacteriologic or clinical, as to the course and prognosis of a given case. Hysterectomy is indicated (a) when the uterus contains putrid placental remains that cannot be removed with the finger or curette; (b) when the uterus contains a sloughing fibroid; (c) when the uterus is studded with abscesses; (d) when the uterus has been subjected to severe traumatism and gives evidence of infection. The status of ligation of the pelvic veins in puerperal septic thrombophlebitis is still *sub judice*. The results thus far warrant a further trial with the procedure. In acute puerperal septic peritonitis good results have been obtained by the Germans with multiple incisions and drainage. Perimetric and parametric abscesses should be approached without entering the general peritoneal cavity. In unilateral pyosalpinx or ovarian abscess, the usual median laparotomy incision should be avoided, and instead of it, one should be made over Poupart's ligament or at the outer edge of the rectus, so as to avoid entering the general peritoneal cavity. Although I am an advocate of major surgical intervention in suitable cases, I have had occasion during the past seven years to extirpate the uterus in only six cases. From this it can be inferred that it is only rarely that major surgical intervention is indicated in acute puerperal septic infection. The vast majority of the patients recover under appropriate general treatment and such minor surgery as the exigencies of the given case may call for.

Is Pubiotomy a Justifiable Operation?

Dr. J. Whitridge Williams, Baltimore, based his paper on a series of twenty-five successful cases and drew the following conclusions:

1. In 25 pubiotomies performed at the Johns Hopkins Hospital there were no maternal and 3 fetal deaths, only one of which is attributable to the operation.

2. All patients were delivered by forceps or version immediately after pubiotomy. There were no injuries to the bladder; there were 6 perineal and 5 deep communicating vaginal tears, notwithstanding the fact that 12 of the patients were primiparæ.

3. The relative infrequency of injury to the soft parts is attributed to restricting the operation to suitable grades of pelvic contraction, and to the employment of Doederlein's technic, but particularly to the extensive manual dilatation of the vagina and perineum prior to operating. The occurrence of such injuries may be still further decreased by making horizontal instead of upward traction when delivering the head through the vulva.

4. The after-treatment is not so onerous as is generally stated, and most of the patients suffer but little. Immobilization of the pelvis is not necessary, a four-inch adhesive strip around the trochanters being sufficient. The patients usually move spontaneously in bed between the second and fourth days, get up between the fifteenth and twentieth, and are discharged on the thirtieth day with satisfactory locomotion. Healing generally occurs by fibrous union, so that there is definite motility between the ends of the bone in at least two-thirds of the cases.

5. The maternal mortality should not exceed 2 per cent., provided the operation is performed by competent operators on uninfected women, who have not been exhausted by previous attempts at delivery.

6. It is indicated in contracted pelves when the conjugata vera exceeds 7 centimeters, and after a test of several hours in the second stage of labor has shown that the disproportion cannot be overcome, as well as in certain funnel-shaped pelves.

7. Prophylactic placing of the saw is indicated prior to breech extractions or versions from transverse persentations when it appears problematical whether the head can pass through the pelvis and the bone sawed through immediately after discovering the disproportion.

8. In multiparæ with a history of repeated difficult labors, or in primiparæ presenting excessive disproportion, pubiotomy is inferior to Cesarean section performed at the end of pregnancy or at the onset of labor; otherwise it does not enter into competition with it, as the former is the operation of choice in border-line pelves after the patient has been subjected to the test of labor, and at that time it is many times less dangerous than the classical Cesarean section.

9. In uninfected women it should replace high forceps, prophylactic version, induction of premature labor and craniotomy on the living child. In how far it may compete with suprasymphyseal Cesarean section must be shown by future observations.

10. It should not be employed in infected patients or after failure to deliver by other means. It should be regarded as a primary operation whose dangers are infection, deep tears and hemorrhage.

11. When the separation between the cut ends of the bone does not exceed 4 or 5 centimeters, the patients recover perfectly and are able to walk and work as well as previously.

12. In view of the fact that the bone section usually heals by fibrous union, a certain degree of permanent enlargement of the pelvis may follow, particularly in the transverse diameter of the outlet, and less so in the conjugata vera. Under the influence of the hyperemia incident to a subsequent pregnancy, this may occasionally become markedly exaggerated and be sufficient to permit spontaneous labor. Should this not occur, a second pubiotomy may be performed; while Cesarean section should be limited to those cases in which the pelvic contraction is marked and the child large.

Fibromyomata of the Uterus

Dr. I. S. Stone, Washington, D. C., gave his views on the various practical points in connection with the general subject, such as the age of patients, the complications frequently encountered in performing hysterectomy, and the pathologic changes found in the tumors themselves. He reported 160 abdominal hysterectomies; 30 were complete hysterectomies, but the ovaries were not always removed. He thinks the operation at present is nearly as safe as ovariotomy, so far as life-saving goes, but the morbidity is not so low as in the latter operation. The complications resulting from the degenerative changes in the tumor, the danger of sepsis from the proximity to the vagina, and the greater exposure of pelvic connective tissue in hysterectomy will always be considered more productive of mischief than the conditions which follow in the wake of ovariotomy. He gave the question of mortality much attention and quoted from the reports of operations in various hospitals to show marked improvement in results during the last decade. The average mortality, he said, is now about 4 per cent., but many operators have obtained a much lower rate.

Total Absence of the Vagina and Uterus; Right Pelvic Kidney; Absence of Left Kidney; Tubes and Ovaries on Both Sides in the Inguinal Canal

Dr. Thomas S. Cullen, Baltimore: The patient, aged 17, white, came complaining that she had never had menstrual periods. On examination I found total absence of the vagina, but by rectal examination was able to detect a mass filling the right half of the pelvis, which I thought might be the uterus which retained menstrual flow. An incision was made between the bladder and rectum until the mass was reached. It was, however, found to be hard. The abdomen was at once opened and a somewhat irregular mass was found filling the right half of the pelvis. This on its inner aspect had a definite cleft which suggested the pelvis of a kidney. A hand was carried up into the right renal pocket, but no kidney was present at that point. Examination of the left side failed to reveal any left kidney. The mass was evidently a right pelvic kidney. There was no uterus. Half of the right tube emerged from the inguinal canal. The remaining portion of the tube and the corresponding ovary lay in the inguinal canal. A small loop of round ligament was seen emerging from the inguinal canal. On the left side the tube and ovary could not be seen, but could be felt in the inguinal ring. A small portion of the round ligament was discernible.

Dr. Cullen demonstrated a specimen of adenocarcinoma of the Fallopian tube coming from a patient, forty-six years of age. The chief interest in this tube lay in its immense size. It formed a tumor 14x12x10 cm. Near the uterus the tube was normal in size. After it had passed out 5 centimeters, it was 5 centimeters in diameter, and its outer and occluded end was 10 centimeters in diameter. The great distention of the outer end of the tube was in part due to an accompanying hydrosalpinx. The growth was limited almost entirely to the inner surface of the tube. It was of a distinct papillary variety. The left tube was also involved in the carcinomatous process. This was one of the largest carcinomas of the tube on record.

Repair of Inaccessible Vesicovaginal Fistulas Following Hysterectomy

Dr. George Gray Ward, Jr., New York: The important steps which lead to a successful result in the method employed are: (1) The differentiation from a urethral fistula by distention of the bladder with an anilin solution; (2) the employment of deep paravaginal incisions as described by Schuchardt; (3) a longitudinal incision on the anterior vaginal wall from the urethra to the vaginal vault through the fistula and extending into the posterior vaginal wall, and a lateral incision extending the full width of the vaginal vault; (4) the thorough separation of the base of the bladder from the entire anterior vagina and vaginal vault, being careful to commence the dissection in the lower vagina where there is an absence of scar tissue to establish the line of cleavage; (5) evisceration of the bladder into the vagina by means of a sound or similar instrument passed through the urethra; (6) the closure of the opening in the bladder separately from the vaginal incision.

Influence of the Trendelenburg Position on the Quantity of Urine Excreted During Anesthesia

Dr. J. Wesley Bovée, Washington, D. C.: Having recently studied 8 cases of ether anesthesia and 8 of chloroform, I believe that the results demonstrate that almost no urine is received in the bladder while the Trendelenburg position is being employed. If it can be concluded that the renal function is greatly lessened while the patient is in the Trendelenburg position, then the dangers of that position are at once appreciated. In renal inefficiency, and in cardiac and arterial lesions, it would seem the use of the Trendelenburg position would introduce a special element of danger and this would be more marked when ether was used than when chloroform was employed as an anesthetic.

Postoperative Treatment of Abdominal Section for Pelvic Disease

Dr. Brooks H. Wells, New York: Getting the patient out of bed early after operation encourages her, lessens nausea, promotes an earlier return of appetite, increases peristalsis, makes the use of the catheter seldom necessary, makes the bowel movements easier so that there is less necessity for purgatives, improves the respiration, lessens the tendency to pulmonary complications, prevents loss of muscle tone, and greatly facilitates a rapid convalescence. The contraindications are: 1. Shock or general weakness, as expressed in a rapid and weak heart, so that we might fear cardiac failure from the upright position. 2. Cases in which, with a long median incision there has been much tension required in bringing together the fascial edges. 3. In patients who develop septic temperatures or deep wound infections. Of the patients whose cases form the basis of the paper, over 100 have been operated on through a transverse incision, and of these none has developed hernia. Two patients in whom median incisions were used are known to have developed hernia, but neither was allowed out of bed early.

Report of the Committee of the American Gynecological Society on the Present Status of Obstetrical Education in Europe and America

This committee, consisting of Drs. E. B. Cragin, J. C. Edgar, C. M. Green, E. P. Davis, J. W. Williams, J. C. Webster and B. C. Hirst, chairman, recommends that the teaching of obstetrics should occupy at least two years of the medical course, and that those expecting to practice obstetrics should be urged to avail themselves of elective opportunities, and that the number of labor cases personally attended by each undergraduate student should be at least six, under supervision and instruction.

The committee recommends all the known methods of teaching this branch of instruction, namely, didactic lectures, clinical lectures, clinical conferences, ward classes and touch courses, hospital and out-patient instruction, manikin practice in operative obstetrics, and recitations. Of the first three methods the committee recommends specially clinical lectures and conferences. It recommends that ample facilities should be afforded students to make antepartum examinations including inspection, abdominal palpation, pelvimetry, fetometry, vaginal examinations, etc. The committee recommends that a two weeks' hospital residence should be required before the out-patient practice. It is recommended that as obstetrics at present includes pregnancy and parturition, their complications and consequences and the complete recovery of the woman after labor, that obstetric instruction should include the medical and surgical treatment of these conditions. The tendency of obstetrics to become more surgical in practice and to require a surgical training, is evidenced by the fact that in the medical schools of Europe, and in more than one-third of the first fourteen medical colleges of this country, the chairs of obstetrics and gynecology are combined under one head.

On motion, the report of the committee, with its recommendations was adopted.

Cesarean Section for Impassable Contraction Ring

Dr. Robert L. Dickinson, Brooklyn, N. Y. . Apart from a consideration of contracted pelvis, or relative disproportion between the passage and passenger, or blockade by scars or tumors, section for impassable con traction ring is warranted when the following conditions ar present: (1) Child living and not definitely enfeebled or endangered by the length of labor or by unskilled attemp s at extraction; (2) the ring refusing the relax under morph in or complete anesthesia, and to yield to patient manual dilatation by a skilled obstetrician; (3) mother in fair condition for a laparotomy and not infected; (4) request by patient and husband that a somewhat increased risk to the mother be assumed for the sake of obtaining a living child in lieu of embryotomy. These indications are perfected if at a previous labor in expert hands, this same condition of the contraction ring has caused the loss of a child not unduly large. This holds good whether the ring is in advance of the head or about the neck. The association of a rigid ring with other reasons for section is frequently present.

(*To be continued*)

AMERICAN ORTHOPEDIC ASSOCIATION

Annual Meeting held in Washington, D. C., May 3-5, 1910

The President, Dr. Augustus Thorndike, Boston, in the Chair

President's Address: Our Relations with the Community, Especially with Medical Men

Dr. Augustus Thorndike, Boston, urged orthopedic surgeons to take greater interest in the work of other members of the medical profession, and to try by every means in their power to interest other physicians in the work of the orthopedic surgeon.

SYMPOSIUM ON POTT'S DISEASE

Pott's Disease: Causes of Paraplegia and Their Bearing on Treatment

Drs. Charles F. Painter and George C. Moore, Boston, discussed the various causes for the paralysis occurring in the course of Pott's disease, both in theory and as the result of actual observation; the clinical phenomena and the behavior of the cases with and without treatment, including the rationale of treatment. The following conclusions were reached:

Scoliosis occurring in Pott's disease should be regarded, not as a regrettable incident in the course of the disease, but as an evidence of the activity of a tuberculous process. This fact should cause redoubled efforts on the part of the physician to control the underlying disease. So long as this exists, one should be cautious in giving a prognosis as to the cure of the condition. In seeking to relieve this condition, one should be guided by the character of the symptoms and be loath to permit operative interference until further and more convincing evidence has been obtained that surgery can play any part in the cure of these conditions.

Advantages of Braces over Plaster Jackets in Pott's Disease

Dr. Henry O. Feiss, Cleveland: A brace will do all that a jacket can do. Braces can be readjusted to suit changes in size; and they are lighter than the plaster jackets. The parts are accessible, when braces are worn, so that the patient may be bathed. The jacket can be removed by the mother almost as easily as a brace, and the temptation to remove it is greater. The mother should be thoroughly instructed how to adjust the brace, which meets all the mechanical requirements, and is lighter, cleaner, cooler and more scientific than the plaster jacket.

Support for the Spondylitic Spine Obtained by Healing in Steel Bars Attached to the Vertebræ

Prof. Fritz Lange, Munich: The kind of metal used is of much importance. In this minor operation, designed to immobilize four or more of the vertebræ, I use steel wires, 5 mm. thick and 10 mm. long, which have been carefully plated with tin. The operation is applicable only in the early stages of the disease, before the appearance of deformity or when the deformity is slight. The wires employed have tin knobs at their upper and lower ends; and a thread is tied under the knobs, to prevent sinking. Provision is also made to fasten the apparatus to the spine. This new operation, I believe, gives the best chance for spondylitis to heal quickly and without great pain.

Discussion on Pott's Disease

Dr. Newton M. Shaffer, New York: In Pott's disease in the dorsal area, if we can eliminate the trauma of respiration, we are taking a long step in the right direction. Pott's disease below the respiratory region requires very simple support. The movement of the respiratory area is controlled by Nature and by the patient himself, who makes an effort to limit respiration in the affected area.

Dr. S. J. Hunkin, San Francisco: In a majority of cases, the steel braces can be applied with more efficiency than can the plaster jackets; but a plaster-of-Paris jacket is not heavier than a steel brace, if properly made.

Dr. Charlton Wallace, New York: In selecting the treatment for Pott's disease, we must divide the cases according to the stage of the disease. The gist of the whole position is that all orthopedic surgeons are aiming to give the patient the benefit of the best treatment, the main object of which is relief from the superincumbent weight. The non-ambulatory treatment seems to me ideal; but we hate to see children put to bed for several years, so the surgeon tries to get something that will yield proper ambulatory treatment. It is foolish to say that we can absolutely immobilize the spine; therefore, our aim is to get as near to absolute fixation as possible. In the early stages of the disease, when the patients have been taken from bed, nothing can be more advantageous than the plaster jacket, which can be made to weigh no more than a pound or a pound and three-quarters. In patients who are moving around, I do not believe that we can beat plaster-of-Paris. For the convalescent cases, most of us use a brace. Dr. Lange has brought before us a method of treatment which is hazardous, but admirable in the hands of an expert. I should, however, be afraid to try it.

Dr. David Silver, Pittsburg, Pa.: Regarding plaster jackets as opposed to braces, it is merely a question of which we can handle best. The deformity should be corrected during recumbency, and not with the jacket or brace. At the Children's Hospital in Pittsburg, we change the braces ourselves, and do not allow the parents to touch them.

Dr. Ansel G. Cook, Hartford, Conn.: The orthopedist has in these cases a disease to treat and a human being to manage. Sometimes the patient needs the bed; sometimes, fresh air. There are times when the jacket is better, and there are other times when the brace is very much better. The question is, what advantage has either method over other methods.

Dr. H. Augustus Wilson, Philadelphia: No case of Pott's disease has ever been cured by braces or by plaster jackets. Relief from the superincumbent weight is simply one of many means to the end. If recumbency in bed does not interfere too greatly with circulatory activity, then it is essential for a period of time. In many cases, I have seen cure without resort to apparatus. The form of apparatus is of minor importance, but constitutional treatment is of great importance. Whether Dr. Lange's method of getting support of the spinal column without restraint of the respiratory organs or of the body is to be of much use to the ordinary orthopedic surgeon, is questionable.

Dr. Robert S. Lovett, Boston: Neither a brace nor a jacket is thoroughly efficient mechanically, although it takes off some of the superincumbent weight. Great as are the objections to the treatment of Pott's disease by recumbency, it is the only efficient surgical treatment for tuberculosis of the spine. In comparing braces and plaster jackets, we are comparing two relatively inefficient methods of treatment.

Dr. Reginald H. Sayre, New York: I believe that, rather more frequently than Dr. Painter seems to think, the superincumbent weight and bending forward of the spine are factors in the production of these hemiplegias. I do not think that treatment with recumbency, unless supplemented by longitudinal traction or hyperextension, gives adequate support. A jacket without a jury-mast is often a very inefficient means of support. The mast must have a chin support and exert pressure against the anterior part of the neck, to keep the upper part of the body well bent backward. The difficulties in keeping the bones at rest are insuperable. Dr. Lange's method should not be used by anyone who has not very skilful technic. In suitable cases I believe it would be useful; but in the badly kyphosed cases, I do not know that we should get the support needed.

Dr. B. K. McKenzie: I think that all these patients, so far as possible, should be treated by recumbency during the active stage of the disease; but if the recumbency has to be in a house, I am not sure that I should choose it in preference to efficient mechanical support with a brace or a jacket. The patient should live out of doors, day and night; and when the sun shines, he should be directly exposed to the sun's rays.

Dr. G. G. Davis, Buffalo: I have felt for a number of years that our aim should be to progress in the way of shortening the treatment. The main drawback of orthopedic surgery is that the patients are too long under treatment. Dr. Lange has submitted his method as one of the means by which the period of treatment can probably be shortened, and it behooves us to give it a fair trial.

Dr. James K. Young, Philadelphia: I think that there is a field for laminectomy in these cases, when the paralysis has existed a year or eighteen months. After that period, if there is no improvement in the symptoms, or if symptoms of abscess can be verified by the *x*-ray, operation should be performed.

Dr. Albert H. Freiberg, Cincinnati: Treatment by recumbency is one of the oldest methods in Pott's disease. For some reason, we went away from it; and for some other reason, we seem to be coming back to it. It was observed that, as the first result of putting the patients to bed, they made great improvement. Then, after recumbency had been continued beyond three months, the patients retrograded. We have now learned that something more must be done for the general condition; and we have added to the recumbent treatment, the open-air treatment and the care of the patients' regenerative processes. It is only by a combination of these that such remarkable results have been accomplished. I think that Dr. Lange's method offers great promise for a certain class of patients—those who have Pott's disease in its incipiency. If we delay the application of the splints until the later stages, we shall be applying them when the spine is no longer able to respond by the production of the new bone-tissue in the place of that destroyed by the disease, and shall be depending entirely on the mere splinting for the ultimate result.

Dr. Emil S. Geist, Minneapolis: What does Dr. Lange do regarding the future growth of the patient? It has struck me that in these incipient cases, which are usually in children, we ought to consider this point, if the steel is to remain attached to the vertebræ.

Dr. Charles F. Painter: Sclerosis is the keynote of the treatment of Pott's disease by laminectomy. It depends on proliferation of connective tissue; if this is inside the pia, it cannot be touched by laminectomy. In cases in which the granulation process has produced the changes outside the dura only, laminectomy will relieve the paralysis. It must not, however, be performed until the process of shrinking of the scar tissue has sufficiently progressed. The paraplegic condition that we cannot touch for two years are not the class of cases that can be relieved at the termination of the two years. The cases that get well do so because the process is outside the dura.

Dr. H. O. Feiss: I agree thoroughly with Dr. Lovett that recumbency is the ideal treatment, when it can be carried out. I did not say that the principles of the plaster jackets were wrong, but that they could be carried out more accurately and scientifically by means of braces.

Dr. Fritz Lange: The operation which I recommend should be carried out as early as possible, since the object is to secure the healing of the process before much destruction of tissue has occurred. I should not, however, hesitate to employ this method in cases in which the disease has progressed farther. In the case in which the longest time, two years, has elapsed since I performed the operation, I have not been able to observe, by means of the *x*-ray that the vertebræ in the part of the spine spanned by the wires are smaller than those immediately above and below the point operated on. Should I observe any interference with the growth of the spine, I should not hesitate to remove the steel wires after the disease has healed.

(To be continued)

AMERICAN PEDIATRIC SOCIETY

Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Concluded from page 1890)

The Use of Bacterial Vaccines in Children's Diseases

Dr. John M. Howland, New York, and Dr. B. R. Hoobler, New York: This paper is based on cases occurring in the Bellevue Hospital during the last ten months. The infections were the usual ones found in children's hospitals. Unless marked specific results are obtained, conclusions are difficult to draw. There were 31 cases of localized infection with the *Staphylococcus aureus*. They yielded to four or five inoculations of the autogenous vaccine. Of general systemic infections with the staphylococcus there were 3 cases, all of which recovered. The experience with localized infections treated with autogenous vaccines has been very satisfactory. Of streptococcus infection, localized, there were 13 cases, which yielded much less to vaccine treatment than those due to staphylococcus. Of general streptococcus infection, 5 were cases treated. In fifty pneumococcus infections treated with stock pneumococcic vaccine used, we are not able to report any beneficial results nor any unfavorable ones. We are not impressed with the effects of the treatment in vulvovaginitis.

DISCUSSION

Dr. F. S. Churchill, Chicago, reported a case of meningitis due to staphylococcus infections, in which an autogenous vaccine was used, followed by speedy recovery.

Dr. Henry Koplik, New York, said that in the staphylococcus infection his results agreed with those of Dr. Howland; with the streptococcus infections results had been discouraging.

A Case of Thymic Asthma

Dr. A. D. Blackader, Montreal: I wish to report a case occurring in a child ten months old, suffering from severe dyspnea. The child was nursed for six and one-half months, then weaned because of the mother having German measles. It had a severe attack of bronchitis, but with no cyanosis; respirations at that time were of a croupy character; no dulness then over area of thymus. Some symptoms of rachitis developed. Then the child apparently caught a fresh cold; breathing was rapid and difficult, but without cyanosis. This condition increased and there was a distinct area of dulness. Operation was proposed to raise the thymus, but the surgeon declined. The child died the following morning. I have been unable to find the report of a similar case. There was a large cystic mass between the trachea and the esophagus. It is believed that it developed from a bronchial cyst.

The First Sound of the Heart in Children

Dr. F. Forchheimer, Cincinnati: If one were inclined to believe after so long a time in which the normal heart sounds have been studied there is a concensus of opinion among authors in regard to their production, a review of the literature would be disappointing. The statements of different authors are so much at variance as to seem almost incredible. In connection with the normal first sound of the heart there still exists much difference of opinion, but certain modes of its production are accepted by the majority, many of whom differ as to details. In children the pitch is high, depending on the age and size of the child, from *g* or *a*, soprano, below the staff, gradually becoming lower until it reaches double *b*, soprano, below the staff. The dominant factor in the production of the first sound is the systolic contraction of the myocardium; next to this in importance is the tense auriculoventricular valves; then those vibrations occurring in the large vessels; and lastly, the vibration of the semilunar valves. Instead of only two factors for each side of the heart,
four in all, we are forced to accept four fo
is, eight as the number of component par
sound. In the child heart the conditi
plicated; as the organ is slowly dev
immediately after birth to that
transitional phases; dependin
the size of the myocardi
weight of the heart

each side, that
of the first heart
are still more com-
ing from the conditio
of adult life, there must b
on the periods of development
as expressed by the ratio of th
the weight of the body is the mos

important factor; elasticity of the myocardium must also be considered. Whoever undertakes to make a diagnosis of a heart lesion in a child in an offhand manner immediately stamps himself as a dilettante in heart diseases. The manner of differentiating organic from other valvular bruits in children under three as given by Hochsinger, that under 3 years all bruits in the heart are organic is to be deprecated, although this statement has been widely accepted. In children under 3, functional and accidental bruits are found very commonly. They depend on myocardial conditions. Systolic bruits are found in forms of acute myocarditis due to diphtheria, typhoid, rheumatic fever, variola, gonorrhea and septic pyemia. In chorea the bruit is produced by acute endocarditis. The development of the elastic tissue must be taken into consideration in explaining this bruit; if there is a disparity between the strength of the myocardium and the resistance of the elastic fibers there will result more or less of an inequality in the conus arteriosus, which acts as an obstacle; when the blood passes over this a bruit is produced. That the anemic bruit is produced directly by anemia is a matter of some doubt. In many cases of anemia there is no bruit, and many bruits are attributed to anemia which are due to other causes. It is impossible to diagnosticate anemia by listening to the heart.

DISCUSSION

Dr. W. P. Northrup, New York: I wish to emphasize the fact that many murmurs from unexplained causes in children under three do disappear.

Dr. S. McC. Hamill, Philadelphia: I think the explanation offered by Dr. Forchheimer is a valuable one. I have been convinced that there must be more than one etiologic factor for these murmurs, and I am glad to hear Dr. Forchheimer express the view that Hochsinger's statement is incorrect.

Dr. F. S. Churchill, Chicago: I once had a case of a child with nephritis who developed an acute arthritis of the knee joint, when a systolic murmur was heard, which gradually disappeared. Blood cultures in this case were negative.

The Value and Limitations of Cold Air in Acute Respiratory Conditions

Dr. J. P. Crozer Griffith, Philadelphia: There should be a clear idea of what really constitutes cold-air treatment. It might be used in three ways: first, exposure of the body to cold air; that is not what any of us are doing, because the children are thoroughly wrapped up and the body kept warm; second, breathing of cold air; but the cold air does not enter the lungs as cold air; third, the action of cold air on the face. There is question about the benefit of fresh air, but we must not forget that it is not a new thing by any means. Whooping-cough had been treated that way for many years and also phthisis in adults. The employment of cold air in the treatment of acute respiratory conditions had its limitations, and not every case of such disease is to be exposed to cold air.

DISCUSSION

Dr. L. E. LaFetra, New York: At the Baby's Hospital, in which they have instituted a "cold ward," in which the temperature is kept at about 50 F. from November to April; next to this is a regular ward where the temperature is 70 F.; and in connection with this a steam room for administering vapor inhalations. From the cases that have been treated in the cold ward and in the adjacent warm ward, the following conclusions may be drawn: 1. In the acute congestive stages of inflammations of the upper respiratory tract (rhinitis, laryngitis, bronchitis, especially of the small tubes, with or without bronchial pneumonia) warm, moist air is of greater help than cold dry air. 2. In lobar pneumonia, with high temperature and little or no bronchitis, cold dry air is of great advantage. The same is true of pulmonary tuberculosis and of empyema. 3. After the acute stage has passed, and when there is no inflammatory spasm of the larynx or bronchi, the cold-air treatment is of advantage in cases of rhinitis, laryngitis, bronchitis and bronchial pneumonia.

Dr. W. P. Northrup, New York: The essential of the fresh cold-air treatment is partly that it should be circulating, moving air.

Dr. E. E. Graham, Philadelphia: From the standpoint of private practice one is soon convinced that unless you get cold air in the sick room you do not get fresh air; the room that is not cold is apt to contain vitiated air.

Dr. John Howland, New York: It is almost the invariable experience that children with acute infections do better in cold air than in warm air, and with pneumonia they do better out of doors in winter than in summer. The rise in blood pressure accomplished by putting the patient out doors can only result in benefit in these cases in which fall of blood pressure is a prominent symptom.

Dr. A. D. Blackader, Montreal: I agree as to the value of increasing blood pressure in the latter stages, but think that in the earlier stages lowering of blood pressure is indicated. I advocate fresh cold air because I feel that the child is getting more oxygen and a certain amount of stimulation to the respiratory center, rather than because of increased blood pressure.

Dr. T. S. Southworth, New York: I wish to emphasize particularly the advantage of cold fresh air in the prevention of acute respiratory diseases. In our wards the temperature is now kept so low that the faces and hands of the children often looked rather blue and chapped, but acute respiratory infections among them are now very rare.

Retained Intubation Tube; Abductor Paralysis (Diphtheria); Recovery

Dr. W. P. Northrup, New York: I wish to present the following unique case: A fifteen months' old boy had been suffering with diphtheritic laryngeal stenosis and wearing intubation tube two weeks; had had whooping-cough 4 months before contracting diphtheria. He came to the hospital with urgent dyspnea and immediate intubation was attempted by the ambulance surgeon. Intubation was unsuccessful, but efforts resulted in relief. When I tried intubation the tube met with obstinate resistance. The smallest tube was gently forced past the obstruction and relief followed. Artificial respiration was immediately necessary. The first diagnosis was catarrhal laryngitis in a larynx recently injured by diphtheria and intubation, a marked nervous element being added from the recent whooping-cough. There was pseudomembrane visible, tonsils very large, coarse râles everywhere over both lungs. Two days after admission respiration was free, but signs of consolidation appeared at one apex. After three days tube was taken out; after brief sleep child choked up and ceased to breathe; with great difficulty tube was reinserted and artificial respiration again used. Quick emergency relief was required a half dozen times in the first few days. He coughed out all the tubes put in; and required intubation 40 times during stay in hospital; increased sizes used. Patient was discharged, but again returned with dyspneic symptoms and is still in the hospital. The secondary dyspnea would seem to have been due to diphtheritic laryngeal paralysis, plus subglottic swelling, complicated with marked nervous spasm.

Bacteriology of the Blood in Early Life

Dr. F. S. Churchill, Chicago: Medical literature is replete with reports of the study of the bacteriology of the blood in adults, but few reports have been made of such study in infants and children. In scarlet fever alone has such work been done. Together with Dr. Clarke, I have studied the series of cases reported. The study consisted of 50 examinations on 44 infants and children and the study of 16 cases post-mortem. As blood cultures in adults have yielded information of such scientific interest and value, that there is need of more of this kind of work in the study of diseases of infants and children, as it is reasonable to suppose that blood cultures in early life may be of even more value than in later life.

DISCUSSION

Dr. L. Emmett Holt, New York: The taking of cultures in the infections of infants has not appealed to me much as a practical procedure, because the difficulties are great and the results not commensurate with the risks.

Dr. Henry Koplik, New York: With very young infants I have had the same difficulty as Dr. Holt; it is difficult to get enough blood to make a satisfactory culture, and in these cases the results have not been as satisfactory as with older children. However, there are some cases in which the results are excellent.

Dr. Isaac A. Abt, Chicago: In the hospitals cultures should be made. I found that they throw a very important light on many conditions. The efficacy of the work depends much on the expertness of the man making the blood culture.

Dr. David Bovaird, New York: I wish to advocate the taking of blood cultures in children, and as the technic is perfected the same sort of accuracy as now obtained in adults will be gotten in the study of the diseases of children.

Dr. David L. Edsall, Philadelphia: I have come to rely on blood cultures as the most valuable means of diagnosis in obscure conditions of older children. I think it a method of great value.

Dr. F. S. Churchill, Chicago: While we do not know a great deal about the subject of the bacteriology of the blood in infants at present, and cannot draw any very definite conclusions, it is important to go ahead with this study and any accurate method that may add to the knowledge of these conditions should be given a thorough trial.

Acute Pericarditis in Children

Dr. David Bovaird, Jr., New York: [*This paper consisted largely of charts showing in detail the studies carried out on a series of cases, the first one comprising a series of 14 cases of acute pericarditis in children under the age of 5, at the New York Foundling Hospital, during 8 years.*] Acute pericarditis occurs at practically all ages. There is an astonishing prevalence of boys in the list. It is in most cases a secondary affection; secondary particularly to affections of the lung, pleurisy or pneumonia. It complicates bronchopneumonia or lumbar pneumonia without distinction. Of the 14 cases, 11 were purulent. The second chart comprises a series of 17 cases of pericarditis, acute. Twelve out of the 17 were cases of rheumatic fever, and in almost all the type of inflammation was fibrinous or serofibrinous. It is important to recognize pericardial dulness in the fifth right interspace, and especially the progressive increase of this dulness; if the right and left limits of cardiac dulness are outlined, within 12 to 24 hours it is possible to demonstrate any increase of this dulness. Its differentiation from acute dilatation of the heart is of importance. The *x*-ray as now employed is of great value in the diagnosis of these conditions, and it is now possible to make out pericardial effusions with great accuracy by this means, so that the aspirating needle can be used with greater safety. Aspiration at the fifth interspace should be done.

DISCUSSION

Dr. Henry Koplik, New York: There is great difficulty making a diagnosis of pericarditis in young infants because of the fact that the heart lies in such a way that the effusion first begins in the posterior superior angle, and unless the fluid approaches 200 c.c. a diagnosis cannot be made. There is danger in aspiration, as the exudate is apt to become encapsulated and partitioned off and one may get into the main sac and pierce the ventricle.

Dr. Isaac A. Abt, Chicago: The great danger of puncture in all these cases is that it is very difficult to differentiate between a serous and a purulent effusion and the so-called acute adhesive pericarditis.

Chylous Ascites in Infants

Dr. D. M. Cowie, Ann Arbor: A case was seen a little over a year ago with the following history: Delayed birth; difficulty in labor due to the large abdomen; the abdomen greatly increased in size after birth. *X*-ray showed no tumor; scrotal sac was tense, but gentle taxis could push fluid up into abdominal cavity. Child recovered, though it still has attacks of occasional blueness. It was at first thought that there was a heart lesion of some kind. Orthodiagraph showed the right part of the heart further to the right than normal in a child of that age and size. The right heart was very much enlarged. The case was probably due to some form of congenital heart disease. Analyses of the fluid showed that all the elements of chyle were contained in the fluid.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Organization in Texas

The following address by Dr. W. B. Russ of San Antonio, Texas, President of the State Medical Association of Texas, was delivered at the forty-second annual session held at Dallas on May 10, 1910. Dr. Russ' address is particularly notable and commendable as a review of conditions previous to reorganization and the changes wrought in the last ten years. With the exception of a few paragraphs regarding purely local conditions, the address is published entire.

Ten years ago the state medical association had enrolled 296 members. Many parts of the state were not represented at all. The association business was transacted by the mass-meeting plan, which meant that many parts of the state had no representation, and that the city in which a meeting happened to be held always had control of affairs. The organization had, after thirty years of existence, failed to secure the enactment of any public health legislation except a practice act, which in some respects was worse than no law at all. The press was antagonistic and the public out of sympathy with the profession. The endorsement of any measure before the legislature by the physicians of the state was a solar-plexus blow to that measure. All public health laws proposed by the association were treated with derision and contempt.

Texas was a land of promise and of profit to magnetic healers, hoodoo doctors, itinerant fakers, universal specialists and fraud doctors of every persuasion. No medical cult was so absurd in its claims, no fraternity of grafters were so brazen in their methods but that their unworthy sons could find a haven of rest in Texas. Many of these, fortified with the legal standing gained in those golden days for quackery and ignorance, remain with us still as unpleasant reminders of the time when the medical ignoramus and the fraud doctor enjoyed a better standing with the press and the public, the politicians and the courts, than did the reputable members of the medical profession.

The enterprising nostrum manufacturer was unhampered by any check. The doctor was the middle-man through whom the manufacturer reached the public with his products, and yet the doctor himself did not and could not, have any information concerning the true nature of the medicines he was assisting in placing before the public, except such information as the proprietor and his agent with the sample-case saw fit to impart. Subsequent developments have shown that in those days many of our most respected manufacturing chemists, in addition to the reputable products offered through the doctor to his patients, also supplied the public, either directly through dummy concerns or indirectly, with the nostrums flagrantly advertised in the lay press, on bill-boards and through the medium of the street faker. The great mass of the medical profession knew nothing about organized medicine and its possibilities, and in many parts of the state were engaged in bitter and senseless feuds, which were a disgrace to the profession and ruinous to the men so engaged.

To-day what a contrast! Our 155 county societies, with a combined enrollment of about 3,100 members, as if by magic, have accomplished wonders. The old mass-meeting has given place to a truly representative plan of government by which every county society has a voice in managing the affairs of the association through a trained delegate of its own selection. The senseless and disastrous bickerings and quarreling of the old days have given place to an era of better understanding between the members of the profession. The great campaign of education carried on by the county and district societies and by our state journal has enabled us to win the confidence and friendship of the press and of the public. The law-makers now are beginning to understand that the State Medical Association of Texas does not ask for class legislation, that it seeks to secure the enactment of only such laws as are clearly in the interest of the public health. The records of the last two legislatures clearly demonstrate this, as the enactment of the following legislation will show:

The medical practice act.
The anatomical act.
The board of health act.
The tuberculosis sanatorium act.
The leprosarium act.
The pure food and drug act.

Not a single one of these laws could be made to serve a narrow or selfish person. They are clearly worthy of our great profession and are in the interest of the people of Texas. Our present practice act forces medical schools to adopt high standards; broadly defines the practice of medicine so as to include every one who treats, or offers to treat, the sick; provides for proper registration; fixes heavy penalties for grossly unprofessional conduct of a character likely to deceive or defraud the public, and has already been hailed as a model law by not less than a dozen other states. Contrast this with the practice act under the old régime, which discriminated in favor of all practitioners, except the members of the regular profession, which placed no restriction on the doctors and healers who did not prescribe drugs and allowed those who happened to hold peculiar views about the administration of drugs to set up their own standards. Yet this law was the only law passed in the old days, and even it was not passed until it had been given the reverse English. Not a single law asked for since our reorganization has failed to pass. . . .

The many activities in which the association is engaged in the great work of carrying out the purposes for which it was organized and for which it exists are well known to you. That its progress and growth are due largely to the influence of our state journal, I am sure you will agree. Under the able and efficient management of our secretary-editor, the *Journal* has, since its organization in 1905, made a determined and successful fight for the elevation of medical school standards for perfection and final passage of all the medical laws we now have on our statute books. It has unified the profession as no other agency could, and without its influence it is doubtful if any of the many reforms for which we take credit could have been accomplished. Our editor is regarded everywhere, in Texas and outside of Texas, as the ablest state journal editor in the country, and the *Journal* is without doubt the best publication of its kind. During the first years of its existence, Dr. Chase donated the use of his private office to the association to be used as journal headquarters, and he has for several years, in quarters entirely inadequate to the needs of his office and at great personal sacrifice, labored day in and day out for the upbuilding of the association. He has steadfastly refused to use the *Journal's* pages to defend himself against villainous attacks of his detractors and has with as much patience as I have ever known a man to display, allowed himself to be misrepresented and hounded by the influences opposed to the policies of the association and to the very existence of its journal. What this work has cost him in dollars and cents alone few men in the profession would have been willing to sacrifice. His path has been a thorny one, but, under every circumstance, he has shown himself to be a man worthy of the love and respect of the profession and deserving well at the hands of the public. Had it not been for the willingness of the secretary, of the trustees, of some of the councilors and others in the profession, to sacrifice both time and money in the service of the association, our finances would have been wrecked long before this and the reforms which we have accomplished would not have been accomplished. This fact is understood and appreciated by most of you. The small pittance that is collected in dues would never have been sufficient to meet the extraordinary expenses incurred in making all the fights we have had to make. No ordinary man would have been willing to make the sacrifices that the trustees and the editor have made. These considerations have no doubt influenced many of the friends of the association to refrain from making complaints, when in their judgment mistakes have been made, and from offering suggestions for possible changes in the methods employed by the men on whom has been placed the responsibility of managing the association's affairs. That criticisms and suggestion, having for their object the upbuilding and improvement of the association, have been needed, and will be needed in the future, every one will admit.

THE OPPOSITION

This, then, brings us to the consideration of a matter to which I desire particularly to direct your attention—a matter which is at present engaging the attention of every state association in the country, and which should interest the members of every county society. A clear understanding of what I am about to lay before you is of vital importance, for, without that understanding, you cannot appreciate the importance of active and hearty cooperation with the men you see fit to place in control of your affairs. If you will but give attention to the facts that I am about to recite, it will not be long before we can meet and thrash out honest differences of opinion fully and freely, and each one of us can fight for what seems to him to be in the interest of the association without the fear of giving comfort to the association's enemies. I refer to the skilfully planned warfare conducted by the stealthy foes of organized medicine, in which are employed the best efforts of many shrewd and experienced business men with unlimited financial backing, into which have been drawn, by one means or another, some through interested motives, some through honest misunderstanding, many of the most brilliant minds in the profession. An understanding of the nature of this campaign waged against the very existence of the Texas State Association and all other state associations will serve the double purpose of explaining why our friends are unwilling to engage in a fight to bring about changes and reforms that seem to them desirable, while confronted with the fear that their names and influences may be used by our foes to assist in poisoning the minds of the public against organized medicine, and, at the same time, will make plain and easy to understand the animus back of the ceaseless tirade of abuse to which every state journal editor, every trustee, officer and committeeman of every association and every house of delegates is treated. You will, then, understand why the Post-Office Department is besieged with demands that second-class mailing privileges be denied the state journals.

To begin with, you no doubt already know that all of the officers of all the state associations are treated to the same kind of abuse month in and month out, and that when the tactics of the enemy change in one state they soon change in other states. You know that the ammunition used against the profession in one state is used all over again in the other states.

You must know, then, that for all this there is a reason. The reason, my friends, is not far to seek:

1. Organized medicine is responsible for the Council on Pharmacy and Chemistry of the American Medical Association, with the resulting exposures of fraud and deceit, not only on the part of the low nostrums advertised in the cheap part of the lay press, but on the part of many, if not most, of our so-called manufacturing chemists, who, unhampered by any check and considering only the dollars to be earned, have for years been exploiting the profession and through the profession the public. The owners of the millions of dollars invested in the proprietary and "patent-medicine" business could not be expected to submit tamely to exposures which place in jeopardy their enormous business interests. They have not submitted tamely; on the contrary, they have by every means known to the shrewd commercial interests sought to destroy the system of organization which makes possible a continuance of these exposures. With this thought in mind, read the bitter attacks on your state association, other state associations and on the American Medical Association.

2. Dozens of medical journals which depend for their support and often their very existence on the protection of the interests that supply the medical profession with antikamnia, and the long list of less conspicuous proprietaries carrying space in medical publications, are assisting in the campaign against the profession to which their owners belong. The editors and proprietors of many of these journals are men of ability, men of standing in the profession, who under ordinary circumstances do not hesitate to wage war against fraud and deceit. According to ordinary business standards, they are not in any sense dishonorable men; journalism with them is a business just as selling groceries is a business. They do not pretend to endorse the claims of the proprietaries advertised in their pages. Their advertising space is for rent; they take the position that their space is for rent just as a room in a hotel is for rent and that they are no more compelled to vouch for the honesty of the claims made by advertisers than are hotel proprietors compelled to vouch for the uprightness of their guests. We do not complain of their use of advertising space in any manner they may see fit, but that they insist on regarding the official organ of the state association, which is used for the purpose of an interchange of ideas between our members and for conducting the association business, in the light of a rival engaged in a private enterprise who adopts unfair methods of competition. The fight is between the private journal interests, which are business enterprises on the one hand, and the association on the other, because this body finds it necessary to publish a journal as a part of a scheme for carrying on its benevolent purposes, and which representing organized medicine finds it necessary to wage war on the commercial interests that are imposing on the medical profession, and through the profession on the public.

It is unfortunate that the association cannot conduct a campaign of education which happens to affect the manufacturer of proprietary medicines without treading on the toes of our friends who are engaged in medical journalism as a private business.

3. The influence of organized medicine is responsible for the campaign of education which resulted in the enactment of the national pure food and drug law and has assisted in its enforcement. Here again great wealth is forced into a fight against the medical profession. The enemies of the pure food and drug law find it expedient to join our other enemies.

4. Low-grade medical schools, and all the many powerful interests linked with their interests, are fighting organized medicine because of the successful fight that the profession is making to elevate medical college standards. This, of course, means the ultimate elimination of low-grade schools and such a policy is naturally very objectionable to the doctors who run medical schools for their own interests rather than in the interest of the public and the profession.

5. All of the "isms" and "pathies" in medicine, and all of the freak cults, are slowly but surely being eliminated by the adoption of uniform standards for all who seek license to practice medicine, and by laws which so broadly define medicine as to include all who treat the sick for a consideration. As long as freak schools and sectarians are allowed to assume the rôle of martyrs, persecuted by the medical profession for righteousness' sake, and can secure laws under which they may legally define the practice of medicine to suit themselves and can set up their own standards, they will continue to multiply and prosper and new "treatments" with coin enticing names will rise up for the benefit of the crank, the bunco man, and the doctor who cannot make a living at legitimate practice.

6. Organized medicine in Texas is responsible for a law which not only makes it a crime for an ignorant person to assume the responsibility of treating the sick for any ailment, mental or physical, by any method or system whatever, but also makes it a crime to be guilty of "grossly unprofessional or dishonorable conduct of a character likely to deceive or defraud the public," and the penalty is a fine, a jail sentence, and a loss of license. This clause of the practice act was recently invoked in the case of a notorious advertising quack who was tried at San Antonio and had his license revoked. Ever since then he has devoted most of his time in denouncing the medical "trust" and has declared war to the death of the octopus. He delivers a free lecture from every convenient platform and offers his services to all who would kill the great trust dragon which has seen fit to interfere with his right to rob the thin purses of the poor and the ignorant. This recent addition to the anti-organizing crusaders has amassed a snug fortune by taking large fees, often more than $100 at a time, from unfortunates whom he has been able to attract to his lair with the assistance of the press by causing them to pass, with the aid of an olive oil mixture, soap concretions, which his victims are made to believe are gall-stones.

7. Add to these, the usual complement of disgruntled brethren who for one reason or another are always "agin the government" on general principles, the man who thinks that all the reforms in the world are not worth the two dollars a year he is required to pay for membership fee; also the man who does not want to belong to the association and who is against it because it is not what it used to be when he was a boy.

With such an army arrayed against the profession, and in the face of the fact that the men who are elected to manage the association affairs do so at great personal sacrifice without any hope of personal reward, the well-wisher of the association is, as a rule, loath even to suggest reforms which, in his judgment, are needed, for fear of discouraging the men in control of the association affairs and giving comfort to the enemy. The allies are ever on the lookout for recruits. At the earliest signs of dissatisfaction with any of the association officers, or of its policies, the mind-poisoning squad begins to spread the glad tidings that something has gone wrong with the association; that a big split is about to take place; that the sore-head is about to come into his own; that perhaps somebody has been grafting from that two dollars collected for dues. Then the independent journal begins to beat the tom-tom, the proprietary medicine interests commence to delve into the past of the men who have been exposing their frauds. The magnetic healer begins to work on his dynamo and the man who does not like the editor anyhow takes down his snickersnee, and the whole army marches out to engage in the battle.

The profession as a whole understands the nature of this warfare. Never before has the profession been so united as it is to-day. Never have the parasites which feed on the doctor and make him the middle man for reaching the public with dishonest and misbranded proprietary medicines been at so great a disadvantage as now. Never before have the doctors so clearly understood the Dr. Jekyll and Mr. Hyde part played by our large manufacturing concerns. Never have the public been so willing to assist in the enactment and enforcement of laws in the interest of public health. Never have the "schools" of medicine, the quacks and the medical bunco-steerers had so many things to worry about.

The end of this great fight against the medical profession is in sight. The great interests whose business it is to manufacture medicines are adjusting their affairs so as to meet the honest requirements of the Council on Pharmacy and Chemistry and in a short time they will have no reason to continue a fight against honesty in the scale of proprietaries. Hight standards of requirements are eliminating the low-grade medical schools and putting out of business the "isms" and "pathies" in medicine. The public is being rapidly educated and assisting in this great work. The independent medical journals that are worthy to live because of real merit will continue to prosper. Those that cannot live without the support of dishonest advertising houses must go out of business or else improve themselves so that they will be worthy to live.

Your understanding of the nature of the fight that has been waged against the profession will forever put an end to that fight, and your active interest in association affairs will make possible the accomplishment to the fullest extent of the purposes for which the organization exists.

Societies Endorse Owen Bill

The following organizations have passed resolutions endorsing the principles of the Owen bill: Santa Clara (Cal.) County Medical Society, Humboldt County (Cal.) Medical Society, Woodbury County (Ia.) Medical Society, Buncombe County (N. C.) Medical Society, State Medical Association of Texas, Oklahoma State Medical Association, Lamar County (Tex.) Medical Society, Georgia State Medical Association, St. Joseph-Buchanan-Andrew Counties (Mo.) Medical Society, Portland City and County (Ore.) Medical Society, Medical and Chirurgical Faculty of Maryland, Denison County (Tex.) Medical Society, Cincinnati Civic League, Chamber of Commerce, Tacoma, Wash., Board of Trade, Tacoma, Wash., Tacoma Commercial Club, Tacoma, Wash., Mississippi State Department of Health, Madison County (Wis.) Medical Society, Missouri Association for the Relief and Control of Tuberculosis, Rock Island (Ill.) County Medical Society, Essex North District (Mass.) Medical Society, Southwestern Kentucky Medical Association, Wright County (Ia.) Medical Society, Washington County (Pa.) Medical Society, Medical Society of the County of Kings (N. Y.), Sheridan, Mont., Board of Trade, Robertson County (Tenn.) Medical Society, Lorain, O., Chamber of Commerce and Board of Health, Lorain (O.) Medical Society, Huntingdon County (Pa.) Medical Society, Medical Society of the County of Cortland (N. Y.), Cortland Board of Trade, Southeastern New Mexico Medical Association, Missouri State Medical Association, School Improvement Association of Helena, Ark., Houston-Fillmore Counties (Minn.) Medical Society, Marquette County (Mich.) Medical Society, Stevens County (Minn.) Medical Society, Harrison County (Ia.) Medical Society, Clarkesville, Tex., Citizens' Meeting, Barbour-Randolph-Tucker Counties (W. Va.) Medical Association, Labette County (Kans.) Medical Society, Conference of the Methodist Episcopal Church of the State, held at Asheville, N. C., Burleson County (Tex.) Medical Society, Somerset County (Pa.) Medical Society, Martin County (N. C.) Medical Society, Louisiana State Medical Society, Franklin County (O.) Medical Society, Association of the Officers of the County Medical Societies of Washington, Ottawa County (Mich.) Medical Society, Green Lake County (Wis.) Medical Society, Central Kentucky Medical Society, Anderson County (Tenn.) Medical Society, Aiken County (S. C.) Medical Society, Edwards County (Ill.) Medical Society, the Associated Chambers of Commerce of Orange County, Cal., Orange County (Cal.) Medical Society, Franklin County (Vt.) Medical Society.

Medicolegal

Rights Between Carrier and Person Requiring Medical Attention

The Supreme Judicial Court of Massachusetts says that the case of Connors vs. Cunard Steamship Company (90 N. E. R. 601) presented an important question not directly decided in any case which has come to the court's attention. The suit was brought by Alice Connors, as administratrix of Margaret Connors, deceased. The two sisters had embarked on the Ivernia, having a ticket entitling them to a second cabin passage from Boston to Queenstown (or Liverpool). But Margaret undressed and went to bed before the vessel cast off from the wharf, which was reported to the ship's surgeon, who went to her room, felt her pulse, looked at her tongue and asked what was the matter. Thereupon Alice handed him a letter from a physician, addressed to the ship surgeon, saying: "May I explain to you a most sad case which will be under your care during this crossing? The patient herself has no idea of the nature of her trouble, so will you kindly make light of anything ocurring and give us your aid in concealing facts? This note will be handed to you by her sister, who knows all. She has endothelioma of uterus too advanced for more than curetting and cautery, which I did February 13 [letter dated 27th]. Unfortunately this is her week to expect menstruation, but I trust it will give you no special trouble. She will be supplied with creolin for douches and codelia suppos. (ov grs. 1ss) for pain if needed. May I suggest an early vaginal pack should the loss of blood pass the normal that strength may be saved until she reaches home?" After reading the letter, the surgeon left the room and gave directions that the woman should not be allowed to proceed on the voyage. The court is of the opinion that this was justifiable, under the circumstances.

The general rule that a common carrier is bound to accept anybody and everybody who presents himself for transportation and pays the regular fare, the court says, has its limitations. A common carrier is bound to care for all who have become its passengers. For that reason not only is it not bound to accept, but it is under obligation to refuse to accept as a passenger an insane person without a proper attendant or attendants, or one who has smallpox. It was held in cases cited that the justification was made out if the carrier had reasonable cause to suppose, and did suppose, that the safety or convenience of other passengers would be endangered by the person in question, and that it was not necessary to wait to see if the person believed, and with reason, to be afflicted with an infectious disease or so insane, drunk, or sick as to be likely to interfere with the safety or the convenience or both of other passengers, was or was not in fact in the condition he appeared to be in.

This doctrine was admitted by council in this case, but with the contention that the right of the carrier to exclude a person who wishes to become a passenger is confined to those cases where the safety or convenience of other passengers is endangered, or thought to be so, and that the mere fact that a person is afflicted with an internal disease will not justify a carrier in refusing to accept him as a passenger if he offers to pay his regular fare. However, the court thinks it plain that the right to exclude is not confined to cases where the safety or convenience of other passengers is endangered, or thought to be exdangered.

The question of accepting as a passenger a person in need of medical attention is a more serious one in case of a carrier by water than in case the proposed transportation is on land. Hospitals abound on shore, and even where there are no hospitals physicians and surgeons can be found at different stopping places to whose care the traveler in need of medical attendance can be confided. But in case a person in need of medical attendance is taken as a passenger on a sea voyage she must be cared for until the voyage is at an end, and if she is not accompanied by her own physician it might well be held that the responsibility of caring for her had been assumed by the carrier.

The court is of opinion that a common carrier is bound to take as passengers all who offer themselves, ill or well, provided the carrier can furnish the necessary accommodations and the passenger is willing to pay for what he demands. But where a person who is ill presents herself to a common carrier for transportation by water it is her duty to state the fact that she is ill and make special arrangements for her transportation as a person in need of medical attention.

The case of a person requiring medical attendance does not come within the same class as the cases (put in some of the opinions) where a very old or a very young person is alighting from a car and for that or any other reason requires more time than a person in good health and not under a disability. Those persons and persons laboring under other difficulties are included in persons fit to travel. What was to be considered here was the case of one not fit to travel without medical attention. Had notice been given to the defendant corporation of the condition of this woman when her ticket was bought for her the question of what care her physical condition was likely to demand and how and by whom it was to be provided could have been taken up with deliberation and some special arrangement made for the necessary extra care and the amount to be paid to the company if it was arranged that the extra care was to be furnished by it.

The court is of the opinion that the presentation of the letter was a representation by the woman that she needed medical attention during the voyage and looked to the company to supply it. If after the visit which the ship's surgeon paid to her while she was lying in bed in her rooms she had not been put ashore there would have been a serious question whether the company had not assumed the responsibility of giving her proper medical care during the voyage.

A ship's surgeon seems to have been aboard the Ivernia in compliance with the English statute which requires every passenger ship to carry a duly qualified medical practitioner whenever the number of persons on board exceeds 300. It may be assumed that a passenger who falls ill during the voyage can call on the "medical practitioner" for medical attention. But neither the statute, nor the presence on the Ivernia of a "medical practitioner" in compliance with that act, changes the right of a common carrier by water not to receive as an ordinary passenger a person in need of medical atention. In the court's opinion a carrier has that right.

Points from Decision in Favor of Physician Charged with Assault with Intent to Commit Rape

The Supreme Court of Iowa says, among other things, in its decision in the case of State vs. Sells, which it characterizes as unusual in many of its features, that under the statutes of that state, to sustain a verdict of guilty the testimony of the prosecuting witness must be corroborated by other evidence from some other and independent source, tending to connect the defendant with the commission of the offense. But when the offense was charged to have been committed in his own home or office where he had an undoubted right to be, and in a room or place where he was accustomed to meet visitors or transact business with patrons on one of whom the assault was charged to have been made, no possible sinister significance could be given to the mere fact of his presence there, and the corroboration which would satisfy the requirement of the law in such case ought to be more direct and satisfactory than would be held sufficient were he a trespasser or an intruder.

Taking the tendency of the evidence on both sides to show that, at the time of the visit when the commission of the offense was charged, the prosecutrix became for a time unconscious or delirious, with other circumstances, it seems not an unreasonable theory that she was the victim of an hallucination by which the vagaries of an abnormal and distorted imagination had been impressed on her mind as the memory of an actual experience.

It is unfortunately true that such an accusation, however false, especially when made against a professional man whose business calls him into frequent dealing and association with women, is always injurious and often ruinous to him against whom it is directed. So true is this that physicians of the very highest character have sometimes been led to submit to imposition and to compromise with their accusers rather than take the chances of irretrievable injury from public attack on their personal or professional reputation. That the defendant showed signs of anxiety over the story imperiling his good name and should seek the young woman and her friends, and, while asserting his innocence, ask if there were not some way in which the matter could be fixed and the scandal suppressed, might not argue very well for his judgment, but it was just as consistent with the theory of innocence as with that of guilt.

It should also be said in this defendant's behalf that, so far at least as appeared from the surface, he had taken reasonable precaution to protect both himself and his female patients from liability to scandal of this nature. His profession is an honorable one, and one which brings its votaries into the closest and most intimate relations with their clientage. That he had established a hospital in which to receive and treat patients was certainly not to his discredit. He had employed a woman nurse as an attendant in the hospital who had access to its various rooms and departments, and assisted him in the care and treatment of those coming to employ his services. More than this could hardly be expected of a physician practicing in a small country town. Whether both he and the nurse were present at the visits of the prosecutrix was a disputed question, but the arrangement of the building, the employment of the nurse therein, her general duties about the premises, the coming every day of from ten to twenty or more patients who had entrance to the building and were treated therein reduced the probability that rape or assault with such intent could have been committed therein in the manner claimed by the state.

Ordinarily where a case is to be remanded for a second trial this court does not express any opinion on the testimony, but it suggests in this case that, if the state finds itself unable to offer other or additional or further proof in support of the indictment, it will be advisable for the prosecution to enter a dismissal.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

May 28

1 Acute, Subacute and Chronic Infection of the Kidneys and of Other Organs by the Bacillus Coli. W. H. Thomson, New York.
2 Limitations of Caloric Method of Infant Feeding. H. D. Chapin, New York.
3 The Economics of State Care of the Insane. A. W. Ferris, New York.
4 Some Facts the General Practitioner Should Know Regarding the Treatment and Care of the Insane. W. Mabon, New York.
5 Non-detention an All-important Factor in the Treatment of the Drink Habit. C. A. Rosenwasser, New York.
6 Strychnin in Pneumonia of the Aged. W. F. Waugh, Chicago.
7 Cerebellar Ataxia. C. Rosenheck, New York.
8 Therapeutic Possibilities of the Juice of the Fresh Pineapple. B. G. R. Williams, Paris, Ill.

Boston Medical and Surgical Journal

May 26

9 *The Cause of Gastroptosis and Enteroptosis, with Their Possible Importance as a Causative Factor in the Rheumatoid Diseases. J. E. Goldthwait and L. T. Brown, Boston.
10 Present Status of the Antituberculosis Campaign in Massachusetts. J. B. Hawes, Boston.
11 Cesarean Section in Placenta Prævia and Puerperal Eclampsia. R. H. Gilpatrick, Boston.
12 Nuclear Classification of the Neutrophile Leucocytes and its Relation to Disease. S. H. Kagan, Boston.

9. **Cause of Gastroptosis and Enteroptosis.**—This is a preliminary report of the work that has been carried on by Goldthwait and Brown in the hope of finding the real cause of the chronic joint diseases commonly designated as rheumatoid arthritis, osteoarthritis, arthritis deformans, chronic rheumatism, etc.

New York Medical Journal

May 28

13 Comets and Plague—Galileo and his Sphygmograph. J. Knott, Dublin, Ireland.
14 The Influence of Alcohol on Trauma. F. S. Dennis, New York.
15 Some Anomalies of the Sigmoid. L. L. McArthur, Chicago.
16 Modern Methods in Pancreatic Diagnosis. W. G. Lyle, New York.
17 Selenium. A. Rose, New York.
18 Fibromyomata Uteri. A. Samuels, Baltimore.
19 Ministering Women. C. E. Nammack, New York.
20 The Animal Parasites Found in the Intestines of Native Children in the Philippines. I. W. Brewer, Samar, P. I.
21 Serodiagnosis of Syphilis (continued.) V. C. Pedersen, New York.

Lancet-Clinic, Cincinnati

May 14

22 Practical Points on the Anatomy and Physiology of the Nose: Special Reference to Acute Affections of the Nasal Accessory Sinuses. D. T. Vail, Cincinnati.
23 The Therapeutic Application of the Low Protein Ration. J. H. Kellogg, Battle Creek, Mich.
24 *Teaching Ophthalmology. A. R. Baker, Cleveland.
25 The Choice of a Microscope. C. Goosman, Cincinnati.

24. Abstracted in The Journal, April 16, 1910, p. 1333.

Northwestern Lancet, Minneapolis

May 15

26 Management of the Third Stage of Labor. F. L. Adair, Minneapolis.
27 *The Metabolism and Modern Treatment of Diabetes. F. S. Bissell, Minneapolis.
28 How Not to Request the Examination of a Public Water Supply. H. A. Whittaker, Minneapolis.
29 Sewerage and Water Supply. J. C. Boehm, St. Cloud, Minn.

27. **Metabolism and Modern Treatment of Diabetes.**—Bissell emphasizes that a patient with diabetes requires exactly the same amount of food that is required by a normal individual under the same conditions, usually about 35 to 40 calories per kilogram. In no case should a sudden and radical change be made from one diet to another, but, on the contrary, one should proceed carefully and determine as nearly as possible the tolerance of the patient for carbohydrates. This not only makes it possible to properly classify each case, but in great measure, makes the prognosis. The procedure followed by Bissell is to add to the standard diet 100 gm. of wheat bread and see what happens. He says that if less than 50 gm. of sugar appears in the urine, withdraw carbohydrates and see if sugar disappears. If more than 50 gm. appears, do not withdraw carbohydrates from the diet, but give on the second day 75.0 wheat bread, on the third day 50.0, and on the fourth 25.0. Then if no diacetic acid or acetone has appeared, withdraw entirely. If sugar disappears from the urine we know we are dealing with a mild form of diabetes. If, on the other hand, sugar persists in the urine on a carbohydrate-free diet but disappears when albumen is given in as large a quantity as 600 grams per day, the case is one of medium severity. The severest type of case is manifested by the persistence of sugar even under starvation treatment.

Doubtless an inheritance from an earlier conception of this disease, the practice still prevails in many quarters of placing every diabetic on the standard carbohydrate-free diet regardless of his power of sugar combustion or tissue requirement. The patient either frankly rebels, surreptitiously resorts to the food which his tissues crave, commits suicide, or develops acidosis.

It is the essential object of Bissell's paper to emphasize the necessity of determining the boundary of sugar assimilation in each case before beginning treatment. Having determined the point and the caloric requirement of the individual the selection of a diet is quite simple, if certain changes are borne in mind.

Medical Fortnightly, St. Louis

May 10

30 Touring the Lands where Medical Science Evolved. R. G. Eccles, Brooklyn.
31 Action of the Ions Produced by Radium. H. Robarts, St. Louis.

Ophthalmic Record, Chicago

May

32 A One Degree Astigmatism Scale. J. N. Rhoads, Philadelphia
33 Cataract Absorption. A. M. MacWhinnie, Seattle.
34 A New Forceps for the Removal of the Anterior Lens Capsule. F. Tooke, Montreal.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

May

35 Is Pubiotomy a Justifiable Operation? J. W. Williams, Baltimore.
36 *Dysmenorrhea in Nulliparous Women without Gross Local Pathologic Lesions. C. C. Norris and E. P. Barnard, Philadelphia.
37 Effect of Animal Extracts on Uterine Contractions. I. Ott and J. C. Scott, Philadelphia.
38 Functional Disorders of the Bladder in the Female Simulating Cystitis. A. Stein, New York.
39 The Rectum and Bowel in their Relation to Pelvic Diseases. J. Brettauer, New York.
40 Thirty-five Pound Uterine Fibroid Complicated by Umbilical Hernia. H. A. Royster, Raleigh, N. C.
41 Three Unusual Cases of Meningitis. E. V. Davis, Chicago.
42 Acute Otitis Media from Pediatric Viewpoint. J. P. Pendleton, Brooklyn.
43 Heart Disease in Infancy and Childhood. D. R. Reilly and A. D. Smith, Brooklyn, N. Y.
44 Vaccine Treatment of Gonococcus Vulvovaginitis in Out-Patient Children. B. W. Hamilton, New York.

36. **Dysmenorrhea in Nulliparous Women.**—The statistics for this paper have been drawn from 73 cases operated on during the last eleven years. Of these 73 cases Norris and Barnard have been able to trace 40. Cured, 18, or 45 per cent.; improved or temporarily cured, 11, or 27.5 per cent.; not improved, 11, or 27.5 per cent. The results of the various operations are as follows: Dilatation and curettage performed 28 times: Cured, 11, or 39.28 per cent.; improved or temporarily cured, 11, or 39.28 per cent.; not improved, 6, or 21.42 per cent. Dilatation and curettage and Wylie's drain performed nine times: Cured, 6, or 66.66 per cent.; improved or temporarily cured, 1, or 11.11 per cent.; not improved, 2, or 22.22 per cent. Dudley's operation performed once: cured, none; improved or temporarily cured, none; not improved, 1, or 100 per cent. Dudley's operation combined with Wylie's drain performed four times: Cured, 2, or 50 per cent. In two of the 40 cases no record as to the character of the dysmenorrhea was obtainable. The remaining 38 cases, arranged according to the character of the dysmenorrhea, without regard to the operation performed, give the following results:

Ten cases of digestive dysmenorrhea: cured, none; improved or temporarily cured, 2, or 20 per cent.; not improved, 8, or 80 per cent. Eleven cases of spasmatic or expulsive dysmenorrhea: cured, 9, or 81.81 per cent.; improved or temporarily cured, 2, or 18.18 per cent.; not improved, none. Seven cases in which the symptoms were a combination of the spasmatic and congestive types: cured, 3, or 42.85 per cent.; improved or temporarily cured, 1, or 14.28 per cent.; not improved, 3, or 42.85 per cent.

These tables are most striking. When we find that in one type of dysmenorrhea we can cure by operation 81 per cent., while in another we can obtain no absolute cure, and only 20 per cent. of improvements, the necessity of recognizing the character of the dysmenorrhea becomes apparent. Careful diagnosis as to the etiologic factor producing the dysmenorrhea is, in the authors' opinion, the key to the success in the treatment of this condition. Of the above 40 cases 20 were married, 14 had been married for two years without issue. Of these 14 previously sterile cases, 5, or 35.71 per cent., became pregnant within one year following the operation. Two cases of dilatation and curettage had the operation repeated and both were temporarily improved; one patient had a hysterectomy performed and was cured; one had a bilateral oöphorectomy performed and was cured; one case of an unmarried girl who had a dilatation and curettage performed without any relief, about a year after the operation married and became pregnant. The dysmenorrhea was cured by labor. One case was temporarily improved by dilatation and curettage; the menopause appeared four months after operation.

New Orleans Medical and Surgical Journal

May

45 Shortening of Umbilical Cord from Coiling Around Fetal Neck. J. P. Elmore, Edgard, La.
46 Laryngeal Tuberculosis: Some Points of Interest to the Family Physician. A. I. Weil, New Orleans.
47 Ophth Etiology, Pathology and Processes Ca W. Salter, New Orleans.
48 The Cases of Juvenile Cataract in One Family. E. A. Robin, New Orleans.
49 Prevalence of Ophthalmia Neonatorum. M. Feingold, New Orleans.
50 Treatment of Ophthalmia Neonatorum. E. A. Robin, New Orleans.
51 Ophthalmia Neonatorum: Prophylaxis. H. D. Bruns, New Orleans.

University of Pennsylvania Medical Bulletin, Philadelphia

May

52 *Pancreatic Cyst. B. C. Hirst and B. S. Veeder, Philadelphia.
53 Preventive Measures Against Infectious Disease. A. J. Smith, Philadelphia.
54 Chronic Intestinal Indigestion in Children. M. Ostheimer, Philadelphia.
55 Primary Dysmenorrhea: Its Etiology and Treatment by Forcible Dilatation of the Cervical Canal and Application of the Wylie Drain. H. D. Beyea, Philadelphia.
56 The Medical Side of Benjamin Franklin. W. Pepper, Philadelphia.

52. **Pancreatic Cyst.**—The patient had noticed a lump in the abdomen, which did not give rise to any symptoms until five days before admission, when she was seized with a sudden sharp colicky pain in the abdomen, in the region of the mass. This lasted a short time, then subsided, and returned after a day and a half. Examination showed a large slightly movable, spherical tumor, situated high in the abdominal cavity and not involving the uterus. Urine and blood examinations negative. The tumor was supposed to be an ovarian cyst on a long pedicle, which had twisted, causing the pain. On opening the abdomen, the tumor was found to be in the lesser peritoneal cavity, and proved to be a large cyst about the size of a grape fruit, free from adhesions except at its pedicle, which consisted of the head of the pancreas. The cyst was dissected out, it being necessary to cut through the pancreatic tissue of the pedicle. Every possible bleeding point was ligated with catgut, the opening into the lesser peritoneal cavity was closed with catgut and the abdomen closed with drainage. Convalescence was rapid, afebrile, and uncomplicated, patient leaving the hospital two and a half weeks after operation. There were no digestive disturbances or abnormalities in bowel action at any time.

The noteworthy features in this case are the extremely successful result following the uncommon operation of total extirpation; the proof of its being true pancreatic cyst by the presence of pancreatic tissue in the wall of the cyst; and the presence of large quantities of mucin and two enzymes—diastatic and emulsifying—in the cystic contents.

Journal Missouri State Medical Association, St. Louis

May

57 Late Observations on Fecal Examination. J. W. Ousley, Kansas City.
58 Placenta Prævia. R. T. Henderson, Jackson.
59 The Prophylaxis of Typhoid. A. F. Willie, Springfield.
60 The Regular Profession and the Isms. H. J. Rowe, Willard Springs.
61 The Gynecologist of To-Day. W. B. Dorsett, St. Louis.
62 Appendicitis, Diagnosis and Treatment. G. A. Dalamatar, Rich Hill.
63 Lobar Pneumonia. W. S. Love, Bertrand.
64 Our County Society. G. W. Hawkins, Salisbury.
65 Thyroid Instability. A. L. Cambre, Atlanta.

Annals of Surgery, Philadelphia

May

66 *The Relation of Trauma to Cancer Formation. C. Phelps, New York.
67 *Sk Hawley, Bridgeport, Conn.
68 A Hemorrhage from the Scalp of the Skull. A. C. Wood, Philadelphia.
69 *The Pathology of the Gall-Bladder and Some Associated Lesions. W. C. MacCarty, Rochester, Minn.
70 Pancreatic Hemorrhage and Acute Pancreatitis. J. Ransohoff, Cincinnati.
71 Retroperitoneal Hernia of the Pericecal Type. A. C. Matthews, Poughkeepsie, N. Y.
72 *An Operation for Umbilical Hernia. H. A. Kelly, Baltimore.
73 The Diagnosis of Typhoid Perforation. A. D. Whiting, Philadelphia.
74 Treatment of Chronic Tuberculous Sinuses by Beck's Bismuth-Vaselin Paste Injections. J. S. Shober, Philadelphia.

66. **Relation of Trauma to Cancer.**—From a general observation of cases and from a comparative study of discordant statistics Phelps concludes that cancer is primarily dependent on a cause which is congenital, is hereditary in a certain proportion of cases, and is as inexplicable as the force which determines *ab ovo* the future sex and peculiarities of the individual. Its development is favored by various indeterminate and nonessential conditions and is not due to trauma unless oft repeated. Its proximate cause is as yet entirely unknown, and

its future determination will depend on the possible verification of a parasitic infection. These propositions are supported by the frequent occurrence of the disease in persons who are still in early or middle life, without hereditary predisposition, and in absolutely normal and mental equilibrium; and this in the absence of any of the accepted favoring condition.

67. **Skeletal Carcinomatosis.**—In Hawley's case an accident (spontaneous fracture), not frequently occurring in carcinoma of bone, led to the discovery of bone disease, and the history of breast cancer gave a clue to its probable nature. About one year after amputation for cancer, the patient's left leg gave way in the right thigh. Swelling about the hip followed the injury to both legs. Further skeletal examination revealed a moderate total lateral curvature of the spine to the right; tenderness over the third and fourth lumbar vertebræ, and over the seventh and eighth ribs on left side, and under the pressure of the examining finger the seventh rib caved in with the feeling of crepitus. Radiographs showed a fracture of the left femur about 4 inches below the trochanter, with considerable callus formation, overriding and angulation, also irregular areas of osteoporosis in the shaft and neck. The radiograph of the right hip showed a fracture just below the trochanter with the fragments united at a right angle; also honeycombing of the shaft, neck and trochanter. Other exposures made revealed similar areas of softening in both fibulæ and two ribs.

69. **Pathology of the Gall-Bladder.**—As the result of clinical and pathologic study of 365 cases of cholecystectomy, MacCarty concludes that the lesions in the gall-bladder are not definite entities, but degrees in a process of reaction to irritants. He divides these lesions into eight groups as follows: (1) *Cholecystitis catarrhalis acuta:* 65 uncomplicated cases and 90 cases complicated by other stages. Forty-five (69 per cent.) of the uncomplicated cases were associated with gall-stones; (2) *cholecystitis catarrhalis chronica:* 39 uncomplicated cases and 39 cases associated with other types of inflammatory reaction, 30 (76 per cent.) of the uncomplicated cases contained stones; (3) *cholecystitis catarrhalis papillomatosa:* In this group there was only one specimen. One of the villi was enlarged and appeared as a papilloma. The condition was associated with stones and an acute catarrhal reaction in the mucosa; (4) *cholecystitis papillomatosa malignum:* This type does not occur in this series because the cases seen were studied at exploration of inoperable cases; (5) *cholecystitis catarrhalis carcinomatosa:* Three cases of *cholecystitis catarrhalis chronica* were complicated by carcinoma; (6) *cholecystitis chronica:* 78 uncomplicated and 64 complicated cases; of the uncomplicated, 73 (93 per cent.) were associated with stones; (7) *cholecystitis chronica cystica:* 76 cases; (8) *cholecystitis purulenta necrotica:* 33 cases. Pericholecystitis acuta or chronica is considered a sequel of any of the above mentioned degrees of inflammation.

Two hundred and fifty-two, or 67 per cent. of the 365 cases were associated with gall-stones, which varied in shape, size and composition, all of which properties bore no apparent relation to the character of the lesion in the gall-bladder. Of the chronic catarrhal gall-bladders, 76 per cent. were associated with stones. In the more advanced cases of chronic inflammation, in the cases in which practically all of the mucosa was destroyed, the percentage was 93. From these figures it would seem that the occurrence of gall-stones bore a marked relation to the extent of the lesion and that the early acute catarrhal conditions do not necessarily occur associated with stones. MacCarty urges that the gall-bladder, liver, duodenum, pancreas and stomach are embryologically, anatomically, physiologically and pathologically closely related and should be considered a gastro-duodeno-hepatico-pancreatic physiologic system.

72. **Operation for Umbilical Hernia.**—On account of the accumulated fat in the abdomen the tension in these cases is sometimes considerable, and favors return of the hernia. To overcome this Kelly makes an incision from the right and left margins of the hernial opening all the way across and through the strong fibrous sheaths of the recti, then detaching and raising the sheaths from the recti above and below for 2 or 3 cm. The hernial sac is then freed from the rest of the tissue. It is opened and any adherent omentum present is removed. If the intestines are adherent they are carefully dissected free, and replaced in the abdominal cavity. The peritoneum is next sewn together with catgut. Next sew the free margin of the lower under the upper flap from side to side with four to six interrupted silk sutures, using if needs be, catgut between them. If the transrectal incision is angled a little upward and the overlapping of the recti is well done, there may be little tension; there is always a greatly diminished tension in the overlapping at the ring itself. The free overhanging margin of the upper flap is now sewed by a continuous catgut suture to the fibrous tissues and the supporting part of the operation is completed.

California State Journal of Medicine

May

75 Leprosy in San Francisco Previously Undiscovered. W. F. Cheney, San Francisco.
76 Lawsuit for Alleged Malpractice. H. J. Kreutzmann, San Francisco.
77 Prosecution of Illegal Practitioners. J. A. Crawshaw, Hanford.
78 Tumor of the Medulla Oblongata. L. Newmark and M. B. Lennon, San Francisco.
79 Traumatic Injuries of the Head. O. D. Hamlin, Oakland.
80 Remarks Under Head of Geographical Distribution of Leprosy. A. A. O'Neill, San Francisco.
81 The Psychoneuroses: Present Status of Hysteria and Neurasthenia. C. L. Allen, Los Angeles.

Journal of Infectious Diseases, Chicago

May

82 *Relation of Pseudodiphtheria and the Diphtheria Bacillus. P. F. Clark, Providence, R. I.
83 *Plague Infection in a Brush-Rat (Neoatoma Fuscipes). G. W. McCoy, U. S. P. H. and M.-H. S.
84 Susceptibility to Plague of the Prairie Dog, the Desert Wood Rat and the Rock Squirrel. G. W. McCoy and F. C. Smith, U. S. P. H. and M.-H. S.
85 *Distribution of Bacteria in Bottled Milk, and Certain Controlling Factors. J. C. Torrey and A. H. Rahe, New York.
86 *The Value of Opsonin Determinations in the Discovery of Typhoid Carriers. A. Hamilton, Chicago.
87 Pneumococci from Infectious Endocarditis. E. C. Rosenow, Chicago.
88 *Immunologic Studies in Chronic Pneumococcus Endocarditis. E. C. Rosenow, Chicago.
89 An Outfit for Sending Bile, Specimens of Blood, Feces and Urine, and Some Results of the Examination of Such Material. W. R. Stokes and H. W. Stoner, Baltimore, Md.
90 Bacillus Abortus of Bang, the Cause of Contagious Abortion in Cattle. W. J. MacNeal and J. E. Kerr, Urbana, Ill.
91 The Wassermann Reaction. L. T. Clark, Detroit.
92 *The Influence of Age and Temperature on the Potency of Antidiphtheritic Serum and Antitoxic Globulin Solution. J. F. Anderson, Washington, D. C.

82. **Pseudodiphtheria and Diphtheria Bacillus.**—From a careful study of the literature, and from an extended series of experiments, Clark believes himself justified in saying that the pseudodiphtheria bacillus or *B. hofmanni* belongs to a different species from the true Klebs-Löffler bacillus. Doubtless both organisms belong to the same groups and came from common ancestors, but the differences seem to be sufficiently constant to place them in separate species.

83. **Plague Infection in a Brush Rat.**—The fact is now established, says McCoy, that these animals may have plague, which adds another factor to the already perplexing problem of the transmission of plague among the rodents of the Pacific Coast. Fortunately, the brush-rat is not sought for its flesh, as is the ground squirrel, nor does it ordinarily build its nest near human habitations as do the domestic rats.

85. **Bacteria in Bottled Milk.**—Torrey and Rahe found that the upper two ounces of the cream of fresh bottled milk of fair quality contain on the average of 50 to 100 per cent. more bacteria than an equal amount of the lower cream. In older and more grossly contaminated milk the lower cream may embody as many as Hess has suggested; there generally results a reduction of from 30 to 50 per cent. in the bacterial count. The dominant controlling factor in the primary disposition of bacteria in a milk bottle is the upward "rafting" activity of the fat globules. A higher percentage of bacteria are brought to the surface layers in a milk rich in cream than one poor in that substance. At ice-box temperature the rate of increase of bacteria in the cream and that in the skim milk are practically identical. As the temperature is elevated the rate of multiplication in the skim milk outstrips that of the cream until at 30 C. it may be many times as rapid. In certain samples of rather highly contaminated milk the abrupt

change in the temperature of the environment from 5 C. to 30 C. caused a striking bacteriolysis in both the cream and the skim milk. This was probably an expression of bacterial antagonism. The sediment portion of the average bottle of fresh milk contains frequently fewer bacteria than any other region of the fluid. A marked excess of bacteria in the sediment indicates that the milk is old or that it has been kept in a warm place.

86. This paper covers similar ground to that of the same author published in THE JOURNAL, Feb. 26, 1910, p. 704.

88. **Chronic Pneumococcus Endocarditis.**—The points that in Rosenow's opinion seem to merit specific emphasis are the following: In chronic pneumococcus endocarditis the serum has no pneumococcidal power by itself. The phagocytic power of the patient's blood is usually a better index of the actual conditions than the opsonic power of the serum determined with normal leucocytes and even with patient's leucocytes. The destructive power of the patient's blood as compared with that of normal blood corresponds well with the clinical conditions. Hence less reliance should be placed on the results of the opsonin determinations in which no account is taken of the fate of the ingested cocci. The phagocytes in chronic infectious endocarditis show greater variation in their own serum than in normal serum. Variations in the opsonic power of the sternum sometimes occur independently of variations in the phagocytic and destructive power of the leucocytes, but the variations on the part of the leucocytes is always dependent on changes in the serum. While the chief action of serum in phagocytic mixtures is on the bacteria, there is no question, from the evidence at hand, but that the serum also exerts a definite and sometimes a striking influence on the leucocytes. Intraleucocytic destruction is dependent on a substance or property always present in normal serum and in normal leucocytes after treatment with normal serum, but frequently absent in the serum and leucocytes in chronic cases of endocarditis. At times the patient's serum is not only lacking in this substance, but contains another substance which seems to neutralize that in normal serum. This substance is not taken up by the bacteria but the opsonin or some other substance contained in washed sensitized pneumococci is necessary to activate it, because the cocci, which have undergone spontaneous phagocytosis fail to show digestion. Phagocytosis alone, even though marked, does not seem to injure the leucocytes in any way. The bacteria isolated from the cases shown appear to be modified pneumococci and prolonged cultivation in normal serum not only renders them largely resistant to phagocytosis, but makes them also resistant to intraleucocytic digestion. Both these properties are promptly lost in artificial media.

92. **Potency of Antidiphtheritic Serum.**—The average yearly loss in potency of diphtheria antitoxin is about 20 per cent.; at 15 C., about 10 per cent.; and 5 C., about 6 per cent., although in some instances these percentages may be much increased. As a result of this work, there appears to be but little difference in the keeping qualities of untreated sera and sera concentrated by the Gibson process. Diphtheria antitoxin to be placed on the market and there kept under unknown conditions as regards temperature should not be labeled with a return date longer than two years for decrease in potency; in addition, when the serum is sold in syringes with an absorbable piston an excess should be added for this loss. Dried diphtheria antitoxin kept in the dark at 5 C. retains its potency practically unimpaired for at least $5\frac{1}{2}$ years. The lack of confidence in the therapeutic properties of old sera is without basis, as such sera, unit for unit, are as potent as new sera. The protective value of diphtheria antitoxin is in exact accord with its unit value, and is independent of the volume of the serum or other properties in the serum.

Journal Delaware State Medical Society, Wilmington

April

93 Albuminuria in Acute and Chronic Nephritis. J. H. Wilson, Dover.
94 Medical Ethics. G. F. Campbell, Selbyville.

May

95 The Relation of Malaria to the Acute Inflammatory Catarrhal Affections of the Throat and Posterior Nares. C. J. Harbordt, Dover.

Laryngoscope, St. Louis

April

96 Nystagmus Characterized by Rapid Head-Movements. Their Diagnostic Value and Theoretic Explanation. R. Barany, Vienna.
97 [illegible] ograms. S. Lange, Cincinnati.
98 [illegible] L. Davis, Philadelphia.
99 [illegible] of Open Safety Pins by a New [illegible] ittsburg.
100 [illegible] Abductor Paralysis: with Demonstra- [illegible] Gleitsmann, New York.
101 Eye Fixation Forceps Used in Submucous Resection of Nasal Septum. J. M. Foster, Denver.
102 The Diaphragm in Tone Production: A Fluoroscopic Study. J. W. Boyce and A. A. MacLachlan, Pittsburg.
103 The Laryngologic Work of the British Medical Association and the Sixteenth International Medical Congress in 1909. D. B. Delavan, New York.
104 A Gouge for the Removal of the Bony Maxillary Ridge in the Submucous Septal Operation. A. Braun, New York.

Memphis Medical Monthly

April

105 Delirium Tremens: New Plan of Treatment. G. E. Pettey. Memphis.
106 Fatal Cases of Appendicitis. J. W. Barksdale, Vaiden, Miss.
107 The Causes of Continued Hoarseness in the Adult. R. McKinney, Memphis.
108 Arteriosclerosis, a Factor of Insanity. G. G. Buford, Memphis.
109 What and How Shall We Feed Our Fever Patients? D. A. Walker, Trenton.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 14

1 Traumatic Tuberculosis, Traumatic Pneumonia and Traumatic Pleurisy. E. P. Weber.
2 *Von Pirquet's Tuberculin Reaction in the Surgical Diseases of Children. P. Mills.
3 *The Tuberculin Skin Reaction (Von Pirquet). J. W. Bride.
4 Points Relating to Therapeutic Immunization. J. C. MacWatters.
5 The Classification of the Symptoms of Lead Poisoning. W. D. Prendergast.
6 *Plumbism Treated by the Internal Administration of Calcium Permanganate. G. A. Stephens.
7 Causes of Absorption of Oxygen by the Lungs. C. C. Douglas and J. S. Haldane.
8 Auscultatory Friction. H. H. Brown.

2. **Von Pirquet's Tuberculin Reaction.**—The reaction was tried by Mills on 48 children who had been carefully examined without any evidence of tuberculous disease being detected. In every case the reaction was negative. Of cases known to be tuberculous there are 21 in Mills' series. Of these, 19 gave a positive reaction. Two cases gave no reaction; they were: tuberculous peritonitis, tuberculous hydrocele of the tunica vaginalis. Of cases clinically diagnosed as tuberculous there were 43. Thirty-four gave a positive reaction, 9 gave a negative reaction. Of these, 8 eventually proved to be almost certainly not tuberculous. The remaining case, one of spinal caries, is one of the 4 cases in his series in which the reaction was misleading. Of cases clinically doubtful there were 11. Three of these gave a positive reaction; 8 cases gave a negative reaction. Thus of a total of 123 cases the reaction was misleading in 4 only. Two of these were tuberculous peritonitis, one was spinal caries, and one was lymphadenoma, in which the reaction was positive. Mills also found that a previous injection of tuberculin will not produce a reaction in a healthy patient, while an initial injection of tuberculin modifies the type of the reaction in a tuberculous case. The type returns to normal in about a week. Bovine tuberculin behaves in an exactly similar manner to ordinary human tuberculin when used for the reaction. The reaction to bovine tuberculin was similarly modified in type by a subcutaneous injection of human tuberculin.

3. **The Tuberculin Skin Reaction.**—Bride applied the test in 92 cases. He came to the conclusion that the test is of great help in the early diagnosis of pulmonary tuberculosis and in its distinction from unresolved pneumonia and chronic bronchitis, in the differential diagnosis between enteric fever and abdominal tuberculosis, in the early diagnosis of abdominal tuberculosis, and also in the diagnosis of the cause of pleuritic effusions. It is not of much help in cases of tuberculous meningitis, tuberculosis where some acute infectious disease accompanies it, and in tuberculosis associated with much pyrexia.

6. **Calcium Permanganate in Plumbism.**—Stephens found calcium permanganate to be of value in the treatment of plumbism, giving ¼ grain (0.015 gm.) three times a day.

Lancet, London

May 14

9 Some Embryologic Problems in Relation to Medicine. P. Thompson.
10 The Study of the Influences Determining the Prevalence of Bovine Tuberculous Mastitis. S. Delepine.
11 Blackwater Fever. D. G. Marshall.
12 Death from Perforation of the Aorta by a Halfpenny Impacted in the Esophagus. G. G. Turner.
13 Modern Statistical Methods. J. M. Troup and G. D. Maynard.
14 *Modern Methods of Delivery in Contracted Pelves. E. H. Tweedy.
15 The Occurrence of Acetonuria in Cases of Infectious Diseases. A. Harris.
16 Case of Lymphatism. L. P. Burt and J. R. Collins.

14. **Delivery in Contracted Pelves.**—Tweedy sums up his views on the treatment of contracted pelves as follows: 1. Induction of premature labor is never advisable. 2. Perforation is not permissible unless the child is dead. 3. Turning should never be employed as a treatment for contracted pelvis, but may still be performed for complications of labor, such as prolapse of the cord when associated with contractions of the first and second degree. 4. In the greater degrees of contraction time should not be wasted in an endeavor to obtain natural delivery. 5. On the other hand, in the lesser degrees ample time should be given the woman to enable her to deliver herself if possible. Eight or ten hours may be necessary for the molding of the head, and interference should not be considered until there are evidences of fetal or maternal distress. Once fetal symptoms of distress are manifested there should be no delay in delivery. Walcher's position should not be forgotten as an aid to fixation of the head; 6, high forceps should never be applied until all arrangements are perfected for an operation to enlarge the pelvis. It is, in his opinion, a pity to proceed to the latter expedient until forceps have been tried tentatively. It must be confessed they occasionally accomplish their purposes under the most unexpected circumstances. Finally, in these, as in all other obstetric operations, the best results cannot possibly be obtained if rubber gloves are not worn.

British Journal of Children's Diseases, London

April

17 X-Ray Photographs from a Boy, aged Three Years, the Subject of Habitual Constipation. E. I. Spriggs and H. F. L. Hugo.
18 Some Thoughts on the Control of Zymotic Enteritis. J. Allan.

Journal of Obstetrics and Gynecology of the British Empire, London

April

19 *After-Re[illegible] Operations on the Pelvic Organs in 1,000 [illegible] A. E. Giles.
20 *The Uret[illegible] Cervix Uteri. A. Leitch.
21 The Management of the Ureters in Abdominal Pelvic Operations. R. C. Buist.
22 Jonas' and Raynalde's "Byrth of Mankynde." W. J. Ballantyne.

19. **After-results of Abdominal Operations.**—According to Giles the removal of both ovaries and tubes has no marked effect on the subsequent health, for 78 per cent. of the patients were in very good health afterward, and a further 13 per cent., though suffering in different ways, were better than before the operation, making in all 91 per cent. who were quite well, or at least improved. The condition of the general health is even better than it is after unilateral salpingo-oöphorectomy. The likelihood of later trouble developing in connection with the uterus when the organ is left is relatively small, as such an occurrence took place in only 7 cases out of 105. It is therefore worth while leaving the uterus in all cases where it appears to be healthy. The removal of the uterus appears to increase the immediate risk of the operation in inflammatory cases. Menstruation continues after these operations in about 40 per cent. of the cases, the proportion being largest in cases where the operation was done for inflammatory disease. When menstruation persisted after ovariotomy for tumors, it was mostly in cases where the tumors were parovarian or intraligamentary. The inference is that some portion of ovarian tissue has remained behind in these cases.

20. **The Ureter in Cancer of the Cervix Uteri.**—Leitch found that involvement of the ureter is the commonest occurrence in post-mortem examinations of cancer of the uterus. It can be demonstrated also in operable cases. This involvement consists in the production of stricture frequently, (a), by contraction of growth in the surrounding parametrium; (b), by invasion of the ureter wall; and sometimes, (c), by fibrosis in the parametrium, due either to chronic inflammation or to the reaction to cancer cells which have disappeared locally. The ureteral wall may be invaded by cancer directly from the surroundings, the invasion being sometimes evident on naked eye examinations; at other times, even when extreme, demonstrable only by the microscope. Lymphatic permeation of the ureter does occur, and the lymphatic vessels of the ureter and parametrium probably communicate. The nature of the surrounding tissue in the parametrium, the open texture, the proximity of the principal lymphatic vessels from the uterus, the danger of invasion and the peculiarity of the blood supply render resection of the parametrial portion of the ureter advisable when the parametrium is invaded.

Dublin Journal of Medical Science

April

23 Acute Leukemia. R. T. Smith and H. C. Earl.
24 The Physico-therapy of Sciatica. M. Orb.
25 Piroplasmosis and Experimental Piroplasmosis. A. E. Mettam.

Indian Medical Gazette, Calcutta

April

26 The "Epidemic Dropsy" Type of Beri-beri at the Presidency General Hospital. Calcutta. J. W. D. Megaw.
27 Staphylococcal [illegible]s Treated by Specific Vaccination. [illegible] J. H. Russell.
28 Typhoid Fever i[illegible]bia. H. B. Rosair.
29 Therapeutic Use[illegible] (Linn). B. B. Basu.
30 Administration of Quinin in Cases of Fever During Pregnancy. J. E. Bocarro.

Archives des Maladies du Cœur, etc., Paris

May, III, No. 5, pp. 273-336

31 *Anemia and Leucolytic Processes Following Roentgen-Ray Exposures in Leukemia. W. Oettinger, N. Fiessinger and Sauphar.
32 Reactions on Part of Elastic Tissue of the Arteries. L. Bory.
33 Functional Disturbances Dependent on the Specific Muscular Systems of the Heart. E. Hering.

31. **Anemia and Leucolytic Processes Following Roentgen-Ray Exposures in Leukemia.**—The authors consider that the two cases reported demonstrate that Roentgen-ray treatment of leukemia induces both direct and indirect leucolysis; the latter is the work of a leucolytic ferment which seems to be produced in some way under the influence of the rays, and which prolongs the leucolytic action. The red corpuscles also feel the effect of the rays to some extent, so that the blood picture comes to approximate that of pernicious anemia. There is thus always the possible peril with radiotherapy of leukemia that the chronic myelogenous leukemia may become transformed into an acute phase by the development of this corpuscle-disintegrating ferment. The cases further emphasize, they state, the necessity for cautious technic in radiotherapy, with long intervals, especially when the patient reacts promptly and energetically to the exposures.

Bulletin de l'Académie de Médecine, Paris

May 3, LXXIV, No. 17, pp. 371-383

34 *Osteotomy in Treatment of Little's Disease. E. Kirmisson.
35 *Injuries of the Hand and Tincture of Iodin. (Les plaies de la main et la teinture d'iode.) P. Reclus.

34. **Osteotomy in Treatment of Little's Disease.**—Transverse subtrochanteric osteotomy remedied the inward rotation of the legs causing interference of the knees in the case described. This effectually supplemented two previous operations on the muscles. The patient was a girl of 17 and the gait now, ten months later, is apparently normal.

35. **Accidents of the Hand.**—See Paris Letter, page 1883.

Lyon Chirurgical, Lyons

May, III, No. 5, pp. 485-604

36 McBurney's Point and Lanz' Point. A. Garau.
37 Appendicitis and Tuberculosis. G. Gayet and Crotzier.
38 Leucocytosis in Appendicitis. P. Vignard and L. Arnaud.
39 *Tincture of Iodin for Sterilization of the Skin. (L'asepsie du chirurgien et de l'opéré par la teinture d'iode.) L. Bérard and J. Chattot.

39. **Iodin Method of Surgical Sterilization.**—Bérard and Chattot have tested tincture of iodin in treatment of accidental wounds and state that the results showed that it is fully able to sterilize the hands experimentally contaminated with ordinary accidental germs. In a number of emergency cases during the last 3 years, while the field of operation was being painted with the tincture, the surgeon poured the tincture pure or diluted with alcohol over his hands, letting them dry spontaneously before rubbing off the excess with an alcohol wad, omitting all preliminary scrubbing, but there were no infectious complications. The only drawback is that the hands are liable to chap if it is done several times during the day. In order to avoid this, when time permits, they scrub first and thoroughly dry the hands, then pour the tincture of iodin on the fingers, spreading it thence over the forearm. The whole sterilization is complete in from 5 to 7 minutes and they have never had excoriation result with this latter technic. A number of aseptic operations can be performed in turn without renewing the sterilization, merely washing the hands between with soap, water and alcohol for a few minutes. But this loses the main advantage of the Grossich technic, which is that the tincture of iodin alone enables the surgeon to operate safely in regions otherwise prone to infection.

Presse Médicale, Paris

May 7, XVIII, No. 37, pp. 337-352

40 *Acute Thyroiditis and Cardiovascular Complications. J. Parisot.
41 *Dwarf Growth as Result of Intoxications. (Le nanisme toxique.) M. Perrin and L. Richon.
42 *Dosage of Quinin in Malaria. (Mécanisme d'action physiologique de la quinine sur les accès palustres.) A. Tournade and G. Giraud.
43 General Pathology of Lymphadenia According to Recent Writers. A. Clerc.
44 *Improved Technic for Paraffin Treatment of Ozena. R. Leroux.

May 11, No. 38, pp. 353-360

45 Influence of he Temperature of Deep-Lying (La diathermie.) A. Zimmerı

40. **Acute Thyroiditis and Cardiovascular Complications.**—Parisot has encountered four cases of this kind. In the first, the thyroiditis followed the subsidence of puerperal fever; in the second it developed six weeks after the onset of typhoid fever; in the third it occurred during convalescence from mumps in a man of 28. In all these cases the thyroiditis subsided under medical measures but in the fourth case the thyroiditis came on 26 days after the onset of a sharp but brief pneumonia from which the patient had entirely recovered. In this case the process in the thyroid progressed to suppuration, and the pneumococcus was found in the pus. In all the cases there was marked tachycardia without any connection with the temperature. This lack of connection with the fever, which might be severe, mild or entirely absent, was a striking feature of the cases and, when encountered, Parisot says, should suggest thyroiditis and compel search for signs of disturbance in that region. The tachycardia was sometimes aggravated by physical exertion and sometimes was accompanied by paroxysmal palpitation of the heart. Various vasomotor reactions were also noticed. The blood pressure was also at times abnormally low. Study of the cases has demonstrated that these cardiovascular symptoms were always connected with the phase of congestion in the gland; the inflammatory congestion induces hyperfunctioning and this is responsible for the cardiovascular complications. In conclusion, he compares his cases with a few similar ones on record, emphasizing the fact that these cardiovascular complications of acute thyroiditis may become associated with other symptoms to form an incomplete and transient exophthalmic goiter or may merge into the typical and permanent form.

41. **Experimental Dwarf Growth Induced by Tobacco Poisoning.**—Perrin and Richon systematically injected 19 young rabbits from three litters with an infusion of tobacco and found that it seemed to arrest the growth of the animals to a certain extent, both weight and size being considerably less than in the controls from the same litters. There was no tendency to rachitis or malformations, merely a lesser growth of all the tissues. After cessation of the injections the animals grew normally but never attained the size and weight of the controls.

42. **Physiologic Action of Quinin in Malaria.**—A diagram and several clinical charts illustrate the points emphasized by Tournade and Giraud, namely, that the dose of quinin should be given at the hour when the malaria germs are in the most vulnerable phase of their development, and that the dose should be large enough to act thoroughly on them all. If the dose is given when the plasmodia are in the prime of their vitality or are sheltered inside the blood corpuscles it has comparatively little effect on them, and if the dose is too small it does not annihilate the germs but merely modifies the paroxysms into atypical forms. Experience has authoritatively confirmed the value of the rule to give the quinin at the onset of the febrile paroxysm, graduating the dose to the type of infection: 2.5 gm. (40 grains) for the quotidian; 2 gm. (30 grains) for tertian, and 0.5 gm. (8 grains) for the quartan form. The paroxysm in question is apparently not affected by the drug but those that would follow it otherwise are suppressed.

44. **Improved Technic for Paraffin Treatment of Ozena.**—Leroux combines the advantages and avoids the perils of the hot and cold methods of injecting paraffin in treatment of ozena. This he accomplishes by injecting the paraffin cold, and several days later he applies a jet of superheated air to the spot under the influence of which the paraffin softens as if it had just been injected hot, penetrates into the crevices and spreads out in a more even layer. At the same time the hyperemia thus induced stimulates the secretions and aids in the cure of the ozena. He asserts that the injection of paraffin under the nasal mucosa is the only means of actual cure of this disease, all other measures having merely a palliative effect. He uses paraffin with a melting point at 45 C. and injects it in the inferior turbinate and the upper part of the septum, aiming to retain so far as possible the natural shape and size of the passages and facilitate the flow of air through them. It is important, he says, to commence at the remotest part and to allow time for the lesion to heal before making another injection.

Semaine Médicale, Paris

May 11, XXX, No. 19, pp. 217-228

46 Chronic Syphilitic Muscular Atrophy and Tabes. F. Rose and H. Rendu.

Berliner klinische Wochenschrift

April 25, XLVII, No. 17, pp. 757-812

47 Physiology of the Brain According to Latest Research. (Neuere Ergebnisse der Hirnphysiologie.) M. Rothmann.
48 *Indications and Technic for Operative Treatment of Stenosis of Pylorus in Infants. (Operation bei der Pylorusstenose Ochsenius and W. Weber.
49 lysema from Rigid Thorax. (Zur Bestarrer Ausdehnung des Brustkastens von Lungenblähung-Emphysem.) O. Rosenthal.
50 *Nature of the Mountain Sickness in the Andes. (Zum Wesen der andinen Bergkrankheit.) W. Knoche.
51 Physiologic Data from Observation Station at 16,000 Feet. (Einiger physiologischer Untersuchungen aus der Kordillere Bolivien.) W. Knoche.
52 Pathologic Anatomy of Stab Wounds of the Liver. (Stichverletzungen der Leber.) K. Wakasugi.
53 Enlargement of Liver in Rats with Experimental Cancer. (Ergebnisse eines Futterungsversuches bei Ratten, die überimpfte Tumoren trugen.) F.
54 Exhaustion of Agglutinins in Typhoi die Erschöpfung des Agglutinin ungen.) W. Spät.
55 Cholera Not a Nitrite Intoxication. (Choleragift und Nitritvergiftung.) A. A. H. van den Bergh and A. Grutterink.
56 Hematuria from Varicose Veins in Bladder. (Ueber varicöse l.
57 Conjunctivitis. Schultz-Zehden.
58 testinal Functioning. (Moderne

48. **Operative Treatment of Stenosis of the Pylorus in Infants.**—Ochsenius reports 14 cases observed during the last three years and discusses the indications for operative treatment, which was applied in 2 cases with good results. The technic was simplified to a mere longitudinal incision about 2 cm. long in the enlarged and thickened pylorus. The incision was carried down through the pylorus musculature to the mucosa but the latter was left intact. The lips of the wound were then spread and sutured transversely to the axis of the pylorus. This, he states, accomplished the desired

result without making an opening into the stomach and the rapid recovery of the children confirmed the advantages of this technic. He regards the decline in weight as the index for the necessity of operative treatment, a loss of 34 per cent. in body weight being inevitably fatal; even 30 per cent. for breast-fed children and 27 per cent. for others is beyond the danger limit. The weight at birth gives an approximate base for estimation of the weight if records have not been kept. The children were all under 5 weeks old, and 2 died under medical measures only. The fate of the child lies in the hands of the internist; if a week or two of careful internal treatment shows no tendency to improvement an operation should be suggested, and this technic deprives it of most of its dangers. The after-treatment by the pediatrist and attendants is almost as important as the operation itself, Weber (who performed the operation) remarks. He is convinced that in many cases on record the operation would have been successful if the children had received proper attention afterward.

50. **Nature of Mountain Sickness in the Andes.**—Knoche describes the mountain sickness in the Andes as experienced by himself and his party, and emphasizes the importance of the electric charge in the atmosphere as the predominant factor in the sudden attacks of mountain sickness, describing the features and mechanism of the disturbance. The symptoms due to the rarefaction of the air should be distinguished from those resulting from the electric and radioactive elements. The latter are not observed in aviation. The violent, brief attack passes over in a short time, leaving no trace, and it occurs mostly in sheltered valleys.

Deutsche medizinische Wochenschrift, Berlin

May 5, XXXVI, No. 18, pp. 825-872

59 Aneurism of the Abdominal Aorta Perforating into Inferior Vena Cava. R. Elbe.
60 Hemianopsia. C. Behr.
61 Isolated Paralysis of the Musculocutaneous Nerve. (Zur Kenntnis der isolierten Lähmung des N. musculo-cutaneus.) E. Osann.
62 **Manifold Manifestations of Visceral Syphilis.* J. Kretschmer.
63 Opsonins and Staphylococcus Immunity. A. Strubell.
64 *Case of Acute Traumatic Insufficiency of the Kidneys.* (Akuter traumatischer Niereninsuffizienz.) W. Beuster.
65 Rupture of Cicatricial Hernias. (Ruptur von Bauchnarbenhernien.) G. Maetzke.
66 *Treatment of Habitual Abortion. F. Turan.
67 Centennial of the Berlin Medical University Policlinic. (Rede zur Eröffnung des Sommersemesters 1910 im Medizinisch-Poliklinischen Institut der Friedrich Wilhelms Universität als Gedenkfeier zu dessen 100 jährigem Bestehen.) H. Senator.

62. **The Protean Manifestations of Visceral Syphilis.**—Kretschmer insists that the possibility of syphilis should always be borne in mind when confronted with any vague or atypical abdominal syndrome, especially when more than one of the viscera seem to be involved. In the first of the 6 cases of the kind reported, the participation in the syndrome of liver, spleen, intestines and kidneys and the absence of fever, jaundice and edema suggested a possible syphilitic origin, which was confirmed by a history of infection five years before and the gradual complete recovery under mercury and iodid. The only explanation possible is the assumption of multiple gummata in the abdominal organs and their entire retrogression. In two other cases the symptoms resembled those of a former patient explained at autopsy as congenital interstitial hepatitis; it was rebellious to all measures in both instances as also in a third case in which the diagnosis had been hypertrophic cirrhosis of the liver with compression of the bile ducts, but autopsy showed that they were patent. This patient was under observation for nearly 10 years; jaundice had recurred at intervals since childhood, but the patient bore a healthy child at the age of 23. In the fourth case a large tumor had developed in the abdomen three months after removal of an ovarian sarcoma. Some of the findings suggested pseudoleukemia, but a history of four abortions also suggested syphilis. Specific treatment for syphilis was combined with Roentgen-ray exposures and the tumor rapidly retrogressed while the general condition improved. The fifth patient presented a puzzling syndrome explained at autopsy as syphilitic iced liver and chronic adhesive peritonitis. The sixth case reported illustrates the evil of assuming a syphilitic affection when a harmless nervous or other disturbance is encountered in a patient with a history of syphilis in the past.

66. **Hyperemic Treatment of Habitual Abortion.**—Turan calls attention to two cases in which he was able to correct a tendency to habitual abortion by the systematic introduction into the uterus of a suction cannula. It not only induces hyperemia in the organ but stimulates it to muscular contractions, this exercise aiding in restoring normal conditions. In the first case he applied the cannula for half an hour at a time, at 20 sittings in the course of 7 weeks; in the second case the cannula was left for 10 hours at a time, the procedure being repeated 8 times in the course of one month. Both women have since borne healthy children, although there was a history of 5 and 3 abortions, respectively; the patients were 27 and 23 years old.

Münchener medizinische Wochenschrift

May 3, LVII, No. 18, pp. 945-992

68 *Prophylaxis of Epidemic Poliomyelitis. (Zur Prophylaxe der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
69 Production of Atypical Proliferation of Epithelium by Injection of Products of Putrefaction of Albumin. (Zur Erzeugung atypischer Epithelwucherungen mit Eiweissfäulnisprodukten.) H. Stoeber and L. Wacker.
70 Fluoroscopy in Research on the Circulation. (Kreislaufstudien am Röntgenschirm.) O. Franck and W. Alwens.
71 *The Specific Meiostagmin Reaction. II. M. Ascoli and G. Izar.
72 *Transmission of Typhoid by Infants. (Ueber Typhusverschleppung durch Säuglinge.) Rommeler.
73 Roentgen-Ray Treatment of Chronic Bronchitis and Bronchial Asthma. T. Schilling.
74 Rumination in Infants and Older Children. (Rumination im Säuglings- und späteren Kindesalter.) A. Wirtz.
75 *Rectal Gonorrhea in Children. (Ueber Rektalgonorrhöe im Kindesalter.) L. Kaumheimer.
76 Tincture of Iodin in Sterilization of the Skin. (Die Grossichsche Methode der Hautdesinfektion.) K. Knoke.
77 Permeability of the Kidney for Bacteria. (Zur Frage der Durchgängigkeit der Niere für Bakterien.) W. Wyssokowicz.
78 *International Institute for Medical Bibliography. (Grundzüge der *Organisation der medizinischen Literatur.*) E. Abderhalden.

68. **Prophylaxis of Epidemic Poliomyelitis.**—Römer and Joseph report experimental and clinical research which has confirmed the findings of Flexner, Lewis, Levaditi and Landsteiner. The extreme resistance of the virus is shown by persistence of full virulence for 28 days in a dried specimen in one of their tests on a monkey. Their research has further demonstrated, they state, that ordinary formaldehyd disinfection of apartments is sufficient to destroy the virus. The disease in monkeys confers immunity thereafter, suggesting the possibility of effectual clinical serovaccination. The domestic animals do not seem to convey the virus; transmission requires human contact, and healthy germ carriers are a formidable factor in the epidemic incidence of the disease.

71. Discussed editorially in The Journal, May 28, 1910, p. 1790.

72. **Transmission of Typhoid by Infants.**—Rommeler warns that when a nursing mother has typhoid and is sent to the hospital, the infant should accompany her as it is liable to have contracted the infection and, although apparently healthy, may yet serve as conveyor of typhoid bacilli. In the case reported, the infant was received into a friend's home when the mother was taken to the hospital. It was noticed that the child had a little diarrhea, but as it was being weaned, and seemed otherwise well, no attention was paid to this sign of trouble until one after the other six members of the family contracted typhoid and one died. The infant's serum responded positively to the agglutination test although the child kept comparatively well throughout.

75. **Rectal Gonorrhea in Children.**—Kaumheimer urges that greater attention should be paid to involvement of the rectum in case of gonorrhea, especially in children. This may be the cause of the unusual obstinacy of vulvovaginitis in little girls, the infection recurring again and again after the vulvar and vaginal lesions have been cured. The involvement of the rectum is seldom revealed by any clinical manifestations and thus it is liable to escape discovery. He warns in particular to refrain from taking the temperature in the rectum in patients with vulvovaginitis, unless extraordinary care to prevent conveyance of the infection is observed.

78. **Organization of Medical Literature.**—Abderhalden describes the principles on which is based this newly organized attempt in Germany to keep a comprehensive survey over the

entire field of medical literature in all countries. The aim is to publish a monthly index, something like the *Index Medicus*, absolutely complete, but in separate sections for each special field. This is to be supplemented by journals devoted to abstracts only, and each restricted to some special field. The system is completed by the year-books to compile and serve as a guide through the achievements of the past year, each in its restricted field. The centralblatts and year-books already in existence, three of which (biology, biochemistry and veterinary medicine) have already agreed to affiliate with the system, will enlarge their scope while restricting themselves more closely each to its special field. By intercommunication, distribution and exchange of material it is hoped thus to bring the medical literature of the world into a comprehensive and orderly arranged system whereby every article will be listed and important ones summarized and grouped for each reader in an accessible place. He adds that this has already been accomplished for stomatology and, in part, for chemistry.

Wiener klinische Wochenschrift, Vienna

May 5, XXIII, No. 18, pp. 651-684

79 *Characteristics of Cerebrospinal Fluid and Differential Diagnosis from its Examination. E. Mayerhofer.
80 Determination of Tubercle Bacilli in the Placentas of Tuberculous Mothers. J. Novak and F. Ranzel.
81 Decline During Measles of Specific Susceptibility to Vaccine. (Ueber Abnahme der spezifischen Vakzineempfindlichkeit während der Masern.) F. Hamburger and O. Schey.
82 Technic of Wassermann Reaction. (Verhalten von verschiedenen Extrakten bei der Wassermannschen Reaktion mit Berücksichtigung ihrer antikomplementären und hämolytischen Wirkung.) G. Satta and A. Donati.
83 *Influence of Heredity on Incidence of Gastric Ulcer. (Einfluss der Heredität auf die Bildung des Magengeschwürs.) W. Czernecki.
84 Treatment of Chancroids and Buboes. (Zur Behandlung des Ulcus molle und der Bubonen.) L. v. Zumbusch.

79. **Differential Diagnosis from Cerebrospinal Fluid.**—Mayerhofer states that the cerebrospinal fluid always reduces a permanganate solution when boiled with it, and that the intensity of the reducing reaction is an index of different pathologic conditions. He gives the details of eighteen cases to show the valuable information to be derived by this simple test. It can be applied also to the urine, and he is now studying it as applied to infants' urine. An exudate, of course, contains more organic substances than a transudate, and the differentiation is done by heating 1 c.c. of the cerebrospinal fluid mixed with 50 c.c. of distilled water and 10 c.c. of a 25 per cent. solution of sulphuric acid. Just as it boils, 10 c.c. of a one-tenth normal solution of potassium permanganate is added and the whole kept simmering for 10 minutes; when 10 c.c. of a one-tenth normal solution of oxalic acid is added and the fluid becomes at once limpid as this amount of oxalic acid decolorizes this amount of the permanganate solution. Then more of the latter is added until the first drop leaves a distinct and permanent rose-colored trail. Within 15 or 20 minutes of the lumbar puncture the test is complete. The number of cubic centimeters of the permanganate solution required is the index. In meningitis the index is from 2 to 8 while with normal fluid it is very small. After intradural injection of Vienna antimeningitis serum the index dropped to half its previous figure but no change was apparent after injection of serum of French origin.

83. **Heredity and Gastric Ulcer.**—Czernecki recently encountered a family in which the mother and four adult sons and daughters all presented gastric symptoms, and three had well-defined ulcers with a tendency to recurring hemorrhage. All the members of the family were typical examples of Stiller's universal asthenia and tendency to visceral ptosis. Such cases emphasize the importance of a tendency to ptosis in the etiology of gastric ulcer, and the necessity for general treatment in this direction, never restricting treatment of a gastric ulcer to the stomach alone.

Zentralblatt für Chirurgie, Leipsic

April 23, XXXVII, No. 17, pp. 601-640

85 Prevention of Bismuth Poisoning. (Zur Verhütung der Wismutvergiftung.) E. G. Beck.

April 30, No. 18, pp. 641-672

86 *Technic to Ensure Continence with Sacral Anus. (Ueber die Schlussfähigkeit des Anus sacralis.) V. Schmieden.

May 7, No. 19, pp. 673-704

87 *Intravenous General Ether Anesthesia. F. M. Pikin.
88 Intravenous General Hedonal Anesthesia. S. P. Fedoroff.

86. **Technic to Ensure Continence with Sacral Anus:**—Schmieden makes the new anus deep in the gluteal fold, with a small opening, and the peritoneum over the intestine is drawn together and sutured to form a comparatively narrow, long tube enclosing the intestine, and reaching as high up as possible. This is pushed back into the abdominal cavity. By this means the intestine opening at the artificial anus is enclosed in this long, narrow case for a considerable distance, and when stool approaches the anus its pressure in the peritoneal envelop early warns of its presence and thus muscular control can be brought into play. An illustration of the technic is given. In one case recent examination showed entire cure of the previous complete incontinence; there had been also a prolapse of the intestine in this case. The approach of fecal matter or gas gives warning and the patient is thus able with the help of the gluteal muscles to restrain it. Schmieden is convinced that this principle of high intraperitoneal reduction of the diameter of the gut represents progress in this line.

87. **Intravenous General Anesthesia.**—Pikin relates his experiences in fifteen cases with intravenous general anesthesia which were all favorable, but the sixteenth patient died in a few minutes after the commencement of the infusion of the ether solution. Burckhardt's technic was followed in every particular, but the method has been abandoned since this mishap. The communication issues from the surgical service at St. Petersburg in charge of Grekow.

Zentralblatt für Gynäkologie, Leipsic

April 23, XXXIV, No. 17, pp. 561-592

89 Natural Devices for Closing up Vessels in the Female Genitals. (Ueber Gefässverschlussvorrichtungen im weiblichen Genitale). C. J. Bucura.
90 Bacteriologic Diagnosis of Puerperal Fever. K. Freytag.

April 30, No. 18, pp. 593-624

91 *Histologic Research on the Influence of Roentgen Rays on Human and Animal Ovaries. (Beeinflussung menschlicher und tierischer Ovarien durch Röntgenstrahlen.) K. Reifferscheid.
92 The Streptococcus Question. (Zur Streptokokkenfrage.) E. Sachs. (Ueber Virulenzbestimmung der Streptokokken.) J. T. Bürgers.

May 7, No. 19, pp. 625-656

93 Fatal Intraperitoneal Hemorrhage with Myoma. R. T. Jaschke.
94 Incision of Perineum. (Zur Episiotomie.) M. Stolz.

91. **Action of Roentgen Rays on the Ovaries.**—Reifferscheid reports extensive experimental research and six clinical cases in which the ovaries were removed after Roentgen exposures. In all degenerative changes were evident, providing a positive histologic basis for the numerous clinical successes in the therapeutic application of Roentgen rays. One patient was a woman of 37 with pulmonary phthisis on which account abortion was induced after seven Roentgen exposures. The ovaries were removed 18 days after the last exposure, 39 days after the first, and tubal sterilization was done at the same time. None of the follicles was normal in any of the ovaries; there were also signs of capillary hemorrhage.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 26, XXXI, No. 50, pp. 529-536

95 *Constriction Hyperemia in Treatment of Alcoholic Tremor. (L'iperemia alla Bier e la sua applicazione in un caso di tremore alcoolico.) R. Migliaccio.

May 1, No. 52, pp. 545-560

96 Non-Reliability of Hemolytic Test in Diagnosis of Gastric Carcinoma. S. Livierato.
97 Negative Results of Injections of Cerebrospinal Fluid in Epilepsy, etc. (La cura sottocutanea di liquido cefalorachideo nell' epilessia e in alcune psicosi ha qualche utilita?) A. Ziveri.

May 3, No. 53, pp. 561-568

98 *Treatment of Hydrocele. (Nuovo processo di cura radicale dell'idrocele.) G. D'Alberto.

May 5, No. 54, pp. 569-576

99 Contagiousness of Scarlet Fever. (Contagiosita della scarlattina.) G. Appiani.

May 8, No. 55, pp. 577-592

100 Experimental Neoplasms in Animals. A. Lustig.
101 Bradycardia from Malarial Infection. G. Vitello.

May 10, No. 56, pp. 593-600

102 Successful Electrotherapy of Trigeminal Neuralgia: G. Viana.

95. **Constriction Hyperemia in Treatment of Alcoholic Tremor.**—Migliaccio reports prompt improvement of chronic alcoholic tremor in the hand after application of a constricting

band above for an hour and a half a day, with complete cure by the end of the month. The benefit in this case confirms, he says, that realized in writer's cramp, neuralgia and neuroses. Maragliano commends constriction hyperemia as the best method of treating contusions and sprains, and Migliaccio says that his experience has confirmed this.

98. **Operative Treatment of Hydrocele.**—D'Alberto commends Mannino's technic as simple, easy and reliable, while free from the drawbacks of other methods. It aims to obliterate the cavity formed by the vaginal tunic and promote the formation of adhesions. He separates the vaginal tunic from the scrotum part way around, working through an incision 5 cm. long. He then makes a similar incision in the vaginal tunic and after wiping it dry turns in the cut edges and sutures them to hold them back. The lips of the incision, thus reinforced, are then sutured. By this technic the outside of the testicle is covered with the outer side of the vaginal tunic thus folded back, while the two layers of the inner aspect are brought into contact and soon develop adhesions. The result was most satisfactory in the case reported; there has been no recurrence of the effusion, which had previously resisted tapping and other measures, including Volkmann's method of treatment. The patient was a man of 57.

Policlinico, Rome

May 8, XVII, No. 19, pp. 579-610

103 Source of Contagion in Epidemic of Typhoid. (Ancora l'epidemia di Albano Laziale.) D. De Blasi. Commenced in No. 18.

April, Surgical Section, No. 4, pp. 145-192

104 Comparative Study of Effect on the Blood of Extracts of Hypophysis and Suprarenal Gland. (Effetti delle iniezioni di estratto di ipofisi e di ghiandola surrenale sul sangue.) A. Austoni and A. Tedeschi.
105 Cysts of Thyreoglossal Origin in the Floor of the Mouth. (Contributo allo studio delle cisti congenite.) O. Cignozzi. Commenced in No. 3.

Riforma Medica, Naples

April 18, XXVI, No. 16, pp. 421-448

106 *Bilateral Hydronephrosis. (L'idronefrosi da calcolosi renale a proposito di un caso di idronefrosi bilaterale.) F. Zuccari.
107 Non-Infectious Origin of Rachitis. (Teoria infettiva della rachitide.) T. Silvestri.
108 *Alimentary Levulosuria and Urobilinuria as Tests for Liver Functioning. (La levulosuria alimentare e l'urobilinuria quali metodi di indagine clinica della funzionalita epatica.) V. Brun.

April 25, No. 17, pp. 449-476

109 Opsonic Power Acquired, not Congenital. (Sulla genesi del potere opsonico.) R. Ciauri and G. Severino.
110 *Experimental Momburg-Belt Constriction. (Sull'emostasia alla Momburg. Ricerche sperimentali.) G. Carere.
111 Anatomic Study of Bundle of His. (La ricerca e l'esame anatomico del fascio di His: fascio atrio-ventricolare.) G. Roussy and Ameuille.
112 Cammidge Reaction in Normal Urine. U. Sorrentino.

May 2, No. 18, pp. 477-504

113 Kala-Azar in Children and Adults. U. Gabbi.
114 Progressive Facial Hemiatrophy. R. Ciauri.

106. **Bilateral Hydronephrosis.**—The patient succumbed to uremic poisoning shortly after an operation to remove the obstructing stones from the right kidney. The left was also found hydronephrotic, with numerous stones. Zuccari declares that in hydronephrosis from calculi the kidney should not be removed for fear of involvement of the other kidney in a similar process, as renal lithiasis is bilateral in a large proportion of cases.

108. **Alimentary Levulosuria and Urobilinuria as Tests for Liver Functioning.**—Brun gave from 1.4 to 1.7 gm. of levulose and states that the resulting levulosuria was an easy, simple, delicate, practical, accurate and harmless method of determining the functional capacity of the liver. The slightest impairment was revealed by this means, as also the progress toward recovery or aggravation. He applied the test to 400 sick children and about 100 healthy ones, all from one month to 12 years old. The effect was practically the same whether the levulose was taken before, during or after a meal. The levulose appears in the urine by the second hour and persists through the twelfth. The normal liver does not permit the levulose to pass unmodified. He also concludes from his research that urobilinuria is not pathologic unless the urobilin occurs in very large amounts.

110. **Experimental Momburg Belt Constriction.**—Carere's experiments on dogs showed that no permanent disturbances resulted from the constriction by the Momburg technic. At the same time there was invariably a tendency to paralysis in the legs feeling the effects of the constriction, but it always retrogressed sooner or later according to the technic applied. When the tubing was over 1½ inches in diameter, serious injury to the abdominal organs was occasionally observed, but when Momburg's technic was strictly followed the disturbances were only transient.

Ugeskrift for Læger, Copenhagen

April 28, LXXII, No. 17, pp. 484-518

115 Technic for Plastic Operations on the Cornea. (Undersøgelser angaaende Keratoplastik.) C. F. Heerfordt.

May 5, No. 18, pp. 519-532

116 Objective Signs of Improvement and Cure of Pulmonary Tuberculosis. (Objektive Tegn paa Bedring og Helbredelse af Lungetuberkulose.) I. Petersen.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

ALCOHOL A DANGEROUS AND UNNECESSARY MEDICINE. How and Why. What Medical Writers Say. By Mrs. Martha M. Allen, Superintendent of the Department of Medical Temperance for the National Woman's Christian Temperance Union. Cloth. Price, $1.25. Pp. 435. Marcellus, N. Y.: Department of Medical Temperance of the National Woman's Christian Temperance Union [1910].

LIGHT THERAPEUTICS. A Practical Manual of Phototherapy for the Student and the Practitioner. With Special Reference to the Incandescent Electric-Light Bath. By J. H. Kellogg, M.D., Author of Rational Hydrotherapy, the Art of Massage, etc. Cloth. Price, $2.50. Pp. 217, with 67 illustrations. Battle Creek, Mich.: The Good Health Publishing Co., 1910.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. *Part VIII*, Inanition and Fattening Cures. Part IX, Technic of Reduction Cures and Gout. Cloth. Price, $1.50 each. Pp. 103 and 112. New York: *E. B. Treat & Company*, 1910.

KURZGEFASSTES LEHRBUCH DER KINDERHEILKUNDE FÜR AERZTE UND STUDIERENDE. Von Dr. Carl Seitz, A. O. Universitätsprofessor und Vorstand der Kinderpoliklinik am Reisingerianum in München. Third Edition. Paper. Price, 13 marks. Pp. 558. *Berlin: S. Karger, Karlstrasse 15, 1910.*

HANDBOOK OF PHYSIOLOGY. By W. D. Halliburton, M.D., Professor of Physiology, King's College, London. Ninth Edition (Being the Twenty-second Edition of Kirkes' Physiology). Cloth. Price, $3 net. Pp. 923, with 592 illustrations. Philadelphia: *P. Blakiston's Son & Co.*, 1910.

LEITFADEN DER EXPERIMENTELLEN PSYCHOPATHOLOGIE. Vorlesungen, Gehalten an der Universität [illegible] Adalbert Gregor, Oberarzt der Psy[illegible] Leipzig. Paper. Price, 5 marks. [illegible] *Karlstrasse 15, 1910.*

WHAT YOU OUGHT TO KNOW ABOUT YOUR BABY. By Leonard K. Hirshberg, M.D. A Text-Book for Mothers on the Care and Feeding of Babies, with Questions and Answers Especially Prepared by the Editor. Cloth. Price, 25 cents. Pp. 97. New York: The Butterick Publishing Co., 1910.

JAHRESBERICHT ÜBER DIE FORTSCHRITTE DER INNEREN MEDIZIN IM IN- UND AUSLANDE. Redaktion: Dr. Schreiber im Magdeburg and Dr. Rigler in Leipzig. Bericht über das Jahr 1908. Volume III. Paper. Price, 21.60 marks. Pp. 1506. Leipzig: Dr. W. Klinkhardt, 1910.

AN INDEX OF SYMPTOMS WITH DIAGNOSTIC METHODS. By Ralph W. Leftwich, M.D., Late Assistant-Physician to the East London Children's Hospital. Fourth Edition. Cloth. Price, $2.25 net. Pp. 451, with *illustrations*. New York: William Wood & Co., 1910.

THE NEW INTERNATIONAL YEAR-BOOK. A Compendium of the World's Progress for the Year 1909. Editor, *Frank M. Colby*, M.A. Associate Editor, Allen L. Churchill. Cloth. Price, $7. Pp. 702. New York: Dodd, Mead & Co., 1910.

DIE BEHANDLUNG DER KURZSICHTIGKEIT. Von Dr. J. Hirschberg, Geh. Med.-Rat in Berlin. Paper. Price, 3 marks. Pp. 89, with 12 illustrations. Vienna: Urban & Schwarzenberg, 1910.

THE HEALTH OF THE CITY. By Hollis Godfrey, Author *of* "An Elementary Chemistry," etc. Cloth. Price, $1.25 net. Pp. 372. Boston: Houghton Mifflin Co., 1910.

MEDICAL MEN IN THE TIME OF CHRIST. By Robert N. Willson, M.D. Cloth. Price, $1. Pp. 157, with illustrations. *Philadelphia:* Sunday School Times Co., 1910.

THE LAWS OF LIFE AND HEALTH. By Alexander Bryce, M.D. Cloth. Price, $2 net. Pp. 421, with illustrations. *Philadelphia:* J. B. Lip*pincott Company*, 1910.

PROCEEDINGS OF THE NEW YORK PATHOLOGICAL SOCIETY. February and March, 1910. Paper. Pp. 50. Published by the Society. Karl M. Vogel, Editor.

THE IRON MUSE. By John C. Underwood. Cloth. *Price, $1.25* net. Pp. 196. New York: G. P. Putnam's Sons, 1910.

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FIELDS OF USEFULNESS OF THE AMERICAN MEDICAL ASSOCIATION*

WILLIAM H. WELCH, M.D., LL.D.

BALTIMORE

I wish to offer my hearty thanks for the signal honor of election to the presidency of this Association—an honor to which no member of our profession can be indifferent as a mark of the esteem and confidence of his colleagues and a high office of privilege and opportunity. The bestowal of this honor on one not engaged in the practice of medicine I interpret as a conspicuous recognition of the importance of those sciences on which this practice is founded.

In the recent death of Robert Koch the world mourns the loss of one of the greatest scientific investigators and benefactors of his race of all time—one who shares with Pasteur the immortal distinction of founding and developing the modern science of bacteriology, and establishing the germ theory of infectious diseases, which has had a revolutionary influence on practical and especially preventive medicine. To him we owe not only the introduction of the methods which have made possible the great discoveries in this field, but also the most fruitful exploration of the domain whose gates he had unlocked.

Since our last annual session there have passed away many eminent in our profession who have been identified with the work of this Association. Of those honored by the Association with high office, the especial tribute of our respect and grateful appreciation is due to the memories of Dr. Herbert L. Burrell, a recent president of the Association, distinguished surgeon and public-spirited citizen, to whom so much of the remarkable success of our sessions in Boston and Chicago was due, and of Dr. William Biddle Atkinson, the permanent secretary of this Association from 1864 to 1899—more than half the years of its existence—and for much of this time the editor of the *Transactions.*

To the honored roll of martyrs to medical science has been added recently the name of Dr. Howard Taylor Ricketts, who died in the City of Mexico from typhus fever, with which he was stricken while engaged in its investigation.

Aided partly by grants from the Committee on Scientific Research of this Association, Dr. Ricketts, by his important investigations, especially of Rocky Mountain fever and Mexican typhus, had acquired a place in the front rank of American pathologists. Scientific medicine in this country has suffered a serious loss by the untimely death of this brilliant young investigator.

MONUMENT TO YELLOW-FEVER COMMISSION

As it has always been the endeavor of this Association to secure suitable recognition of our medical heroes, we welcome with keen satisfaction the action of Senator Owen in introducing a bill in Congress, in line with a previous recommendation of President Roosevelt, appropriating the sum of fifty thousand dollars for a monument in Washington in honor of the Yellow-Fever Commission, composed of Major Walter Reed, Dr. James Carroll, Dr. Jesse W. Lazear and Dr. Aristides Agramonte, and commemorating also the men who submitted voluntarily to the experimental inoculations which resulted in the discovery of the mode of conveyance of yellow fever. The President of the American Medical Association, the Secretary of War, Major-General Wood, the Surgeon-General of the Army and Colonel William C. Gorgas are named as the commission to select the site and supervise the erection of this monument. This effort to perpetuate by worthy national recognition the memory of high courage and beneficent achievement will doubtless receive the endorsement and active interest and support of this Association.

MONUMENT TO MEDICAL OFFICERS OF WAR

In this connection, I may recall to your attention that, in accordance with the recommendation of my immediate predecessor, Dr. Gorgas, in favor of the suggestion of Dr. Weir Mitchell, the Association has already taken action looking to the erection in the national capital of a monument in memory of the medical officers on both sides who gave up their lives in the performance of their duties during the war between the states. This purpose to commemorate members of our guild whose services in a national crisis were for humanity should appeal strongly to the members of the profession throughout this country.

THEME: ACTIVITIES OF THE ASSOCIATION

It is my purpose in this address to call your attention chiefly to certain subjects suggested by some of the activities of this Association, with the desire of indicating to some extent and in a general way their nature and what has been accomplished, especially in recent years. Within the limits of an address none of these topics can be treated exhaustively, and many of equal importance must be left untouched. As the president has the opportunity of offering directly to the House of Delegates whatever specific suggestions he may desire to make, I shall not use this occasion for that purpose.

DEVELOPMENT OF SCIENTIFIC ASSOCIATIONS

The spirit of association is inherent in human nature. Although voluntary associations of those pursuing the same occupation and having common interests have existed from ancient times, it was not until the Renaissance that literary societies, nor until the rise of experimental science in the seventeenth century that scientific societies in the modern sense were formed. As is well known, these early societies, in which medicine was not separated from the natural and physical sciences, were powerful agencies in the advancement and diffusion of knowledge. The eighteenth century saw the development of separate local medical societies, both in Europe and in this country. Before the end of this century not less than seven of our state medical societies had been created, the first being that of New Jersey. The original charter of the Connecticut Medical Society, incorporated in 1792, is historically almost as interesting as the famous Connecticut constitution of 1639, for it embodied the essential federative feature of the present plan of organization of our state and national associations by constituting the county society as the unit with representation by delegates in the state society.

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* President's Address at the Sixty-first Annual Session of the American Medical Association at St. Louis, June 7, 1910.

A new type of scientific society, of national scope and characterized by periodical, migratory meetings, originated in 1822, chiefly through the efforts of von Humboldt, by the formation of the still flourishing *Gesellschaft Deutscher Naturforscher und Aerzte.* The occasion for the formation of this and later of many similar societies is to be sought mainly in the growth and organization of science, with the consequent greater need of intercourse, as well as in improved facilities of travel.

ORIGIN OF AMERICAN MEDICAL ASSOCIATION

It is to this type of itinerant national society with annual meetings that the American Medical Association, started in 1846, belongs, and, although sixty-four years is a brief life in the history of institutions, still our Association not only is the first example of this pattern of society in this country, but it is one of the oldest of the kind in the world, being preceded by the German society mentioned, the British Association for the Advancement of Science in 1831 and the British Medical Association in 1832.

Although the origin of the American Medical Association is to be traced to a national convention of delegates from medical societies and colleges, called by the Medical Society of the State of New York, mainly through the efforts of Nathan Smith Davis, to elevate the standard of medical education, then in a most deplorable condition in this country, it may be recalled that the same society as early as 1839 adopted a resolution offered by Dr. John McCall with the following preamble: "A national medical convention would advance, in the apprehension of this society, the cause of the medical profession throughout our land, in thus affording an interchange of views and sentiments on the most interesting of all subjects—that involving men's health and the means of securing or recovering the same." Although the steps then taken to secure this end proved fruitless, it was more in accordance with the broad spirit of Dr. McCall's resolution than with the narrower, though important purpose determining the call of the convention of 1846 in New York that the organization of the American Medical Association was effected at the meeting in Philadelphia in 1847, when the purposes were declared in the preamble to the constitution to be "for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it."

Our present constitution, adopted in 1901, has not added to or changed materially these excellent purposes as originally declared, save in one particular, which is significant of the progress of medicine and the relations of physicians to the community. "The broad problems of hygiene" are substituted for "the duties, responsibilities and requirements of medical men" as the subject for enlightenment and direction of public opinion.

EARLY ORGANIZATION

At the birth of the Association much discussion was given to the question whether it should be organized as a representative body or as a self-constituted and self-perpetuating society, electing its own members. It is curious to think what would have been the history of the Association had not the wiser choice been made, in favor of the more democratic, representative plan. This plan, which continued in operation for fifty-five years, provided for representation not only from permanently organized medical societies, whether local, district or state, but also from medical colleges, hospitals and other institutions, every ten members of an auxiliary society being entitled to a delegate and only the delegates having a voice in the conduct and affairs of the Association. However cumbersome and ineffective this basis of representation became with the growth of the profession and of the country, it was well suited to the conditions existing at the time of its adoption.

FIRST HALF-CENTURY

The Association has grown so rapidly and achieved so much since its improved organization nine years ago, that we are in danger of losing sight of the great service which it rendered to the profession during the preceding half-century, in spite of defects and failures and errors. The founders of the American Medical Association brought into being a national organization, truly representative of the whole medical profession of this country. Such an organization has inherent elements of strength which secure its future even against its own blunders and still more against attacks from without. In spite of an unfortunate incident in its history the Association has been from the beginning the great unifying force for the profession of this country, whose common interests it has been its chief endeavor to serve. Since its foundation it has had the devoted loyalty and faithful services of many leaders of the profession.

English and American physicians of the early part of the last century were greatly inspired by the work of the admirable Manchester physician, Dr. Thomas Percival, entitled "Medical Ethics," which appeared in 1803, and many medical societies of that period adopted codes of ethics based upon the precepts of this excellent book. The American Medical Association followed this custom in framing such a code and thereby exerted a distinctive and beneficent influence upon standards of professional conduct throughout this country. Although in form and certain details this code became obsolete, its underlying principles are enduring.

The central object of the organization, the cultivation of medical science and art, was always kept clearly in view. The condition and the progress of American medicine are well reflected in the thirty-three volumes of our *Transactions,* followed by THE JOURNAL, established in 1883. My memory goes back to attendance on meetings in the late seventies and I recall attractive programs, inspiring addresses, valuable scientific papers, agreeable personal and social intercourse and generous hospitality.

What the Association was able to accomplish in the first fifty-five years of its existence in regard to such matters of professional and public interest as medical education, legislation, organization, protection from fraud, is insignificant in comparison with the achievements of the last decade, but this failure was not due to lack of effort or of interest or of realization of the conditions. The fault was mainly in the machinery of organization, long recognized as outworn and inadequate, which rendered practically impossible orderly and effective transaction of business, deliberate and well-considered action, and the adoption and carrying out of any continuous policy or undertaking.

NEW ERA

My object in this brief reference to the past of the Association is not to trace details of history, but to indicate, in the first place, that improvement in organization was urgently needed and, secondly, that the improved organization effected nine years ago marked no break with the past, but was in the nature of an orderly evolution along predetermined lines toward larger and better things. The past decade is often spoken of as a new era in the life of the Association, and such it is, although only in the sense that it is characterized by the attainment of results long desired and long striven for and by possibilities of ever-increasing usefulness.

IMPROVED ORGANIZATION

The much-needed but very simple change in the form of organization effected in 1901 after full discussion and mature consideration was in its essential features identical with that proposed in 1887 by a committee of which the founder of the Association, Dr. Nathan Smith Davis, was chairman; and there can scarcely be found a more striking illustration of the defects of the old plan than the long delay in the adoption of this proposal, a delay resulting not from opposition, but from sheer inability to secure proper deliberation and effective action in the business meetings. It is gratifying and worthy of note that both the earlier and the present plans of organization should embody so largely the conceptions of one man, whose great services to the profession and the public as founder of this Association and for more than half a century zealous promoter of its welfare, as eminent physician and educator, and as public-spirited and far-sighted citizen should stir the members of the Association to more active efforts in behalf of the Davis memorial fund, so that the sum of $5000 conditionally appropriated to this purpose by the trustees may be rendered available.

By basing membership and the right of representation in the Association on the state associations, by creating a delegated business body, large enough to be truly representative but not so numerous as to be ineffective in the transaction of business, and meeting separately from the general and scientific sessions, and by securing on the part of the state associations the adoption of the county society as the unit of the system, a federative organization of the medical profession of this country has been brought about as simple as it is effective. Whatever may be needed in perfecting details of this plan of organization, the experience of nearly a decade has demonstrated convincingly the soundness and wisdom of its fundamental features.

Organization, however carefully devised by man, is inert until it acquires living force by the efforts of those who set it in motion, and the good accomplished depends far more on the character of these efforts than on the instrument employed.

The Association in these latter years has been fortunate in enlisting the adhesion and cooperation of many of the best workers in the profession and even in allied fields, who have given unselfishly their time and energy and thought to work in behalf of professional and public interests; but there are two men, entrusted with most important official duties, whose services have been so conspicuous and are so deserving of the gratitude of the profession that it is only just to mention their names in this connection: Dr. George H. Simmons, who, as General Secretary and manager and editor of THE JOURNAL, has done more than any one else to determine and further the policies of the Association and to place it in its present high position of influence and usefulness; and Dr. Joseph N. McCormack, who, in connection with his valuable work as organizer, has preached the gospel of public health throughout the length and breadth of this land.

ACHIEVEMENTS OF LAST DECADE

Among the more striking beneficial results accomplished by the Association during the past decade I may enumerate the unification and effective organization of the profession; the growth of the national and constituent associations in membership and influence; the development of THE JOURNAL to an importance unsurpassed by any medical weekly in the world; the improvement of the educational and scientific work of the Association through its sections, its scientific exhibit, its grants in aid of research, and the public lectures and addresses of Dr. McCormack; the establishment of the Council on Pharmacy and Chemistry with its chemical laboratory, the Council on Medical Education, the Committee on Medical Legislation, the Council on Defense of Medical Research, the Committee on Ophthalmia Neonatorum, the Committee on Nomenclature and Classification of Diseases, the Board of Public Instruction on Medical Subjects, the Women's Committee on Public Health Education (the status of which, however, awaits clearer definition) and other special committees supported by funds of the Association and working continuously; the compilation and publication of two editions of an authoritative medical directory, owned by the profession; the foundation and publication, without expense to the Association, of the *Archives of Internal Medicine,* in order to meet an urgent need of higher clinical medicine; and, finally, the erection of a new building to accommodate the printing plant and working forces of the Association. This is indeed a record of large and beneficent achievement To describe in any detail the results of the activities here enumerated would far exceed the limits of this address; but on a few of the more significant ones permit me to touch.

COUNCIL ON PHARMACY AND CHEMISTRY

Of the work accomplished by councils and committees that of the Council on Pharmacy and Chemistry is the most notable, and merits the high commendation which it has received from the profession and the enlightened public. A check has at last been put on the exploitation of the profession and to a considerable extent likewise of the public by the strongly entrenched and widely ramifying patent-medicine evil with its shameless frauds, misrepresentations, deceits and dangerous practices. The work of this Council has assumed international proportions and it is gratifying to note that legitimate pharmacy and the respectable manufacturing pharmacists are coming to appreciate more and more its benefits to them.

MEDICAL EDUCATION

For the last six years the Council on Medical Education, by steady, continuous, well-directed work, including personal inspection, has been engaged in collecting and publishing a vast amount of accurate, detailed information concerning the medical schools and every phase of medical education in this country. Its conferences have been attended by leading educators, and the addresses and discussions on these occasions have been interesting and valuable. The purpose of all this work has been constructive and not critical. The facts elicited, as well as those published in the highly important "Report on Medical Education of the Carnegie Foundation for the Advancement of Teaching," which has just appeared, while confirmatory of general impressions, acquire impressive significance when marshaled in concrete, statistical form and are of enormous consequence to the medical profession and the community. The attitude of physicians should be clear in this matter, for the strength and credit of the profession, the great interests of public health, municipal, state and national, and the welfare of the individual all depend on the quality of training given in our medical schools.

The immediately urgent directions of improvement are reduction in the number of poorly supported, existing medical schools by demise or by merger, provision of adequate financial support beyond the fees of students, the elevation and, even more, the conscientious enforcement of the requirements for preliminary training and of standards, the maintenance of at least five well-equipped laboratories conducted by teachers giving their whole time to the work, far better clinical training, such as can be given only in a hospital owned by the school or affiliated with it as its teaching hospital, and realization on the part of universities of their responsibilities for their departments of medicine.

The argument that the country needs to-day, if it ever did, cheap and inferior medical colleges is wholly fallacious, for we have at present in this country practically as many medical schools as all the rest of the world combined, and four to five times as many doctors in ratio to the population as Germany and the older civilized countries; and, moreover, graduates of low-grade schools manifest no peculiar inclination or tendency to seek remote and unpromising localities, but prefer competition in fields already overcrowded.

There have been in recent years influences in operation tending to a diminution in the number of medical schools and of students of medicine. Among these influences may be recognized the inevitable pressure exerted by the demands of state licensing boards and an awakened sense of loyalty and duty to the profession on the part of some of the weaker schools and of many physicians in consequence of fuller realization of the educational requirements of modern medicine, but, as the phenomenon is world-wide, some deeper causes are operative. There may be larger recourse to certain special healing cults and a growing discrimination on the part of the public between well-trained and ill-trained physicians; but more significant is the lessened demand for the services of physicians, resulting from the marked diminution in the amount of disease, especially the acute infections and tuberculosis, as the result of modern sanitation and public health movements, and the increasing tendency of rich and of poor alike to seek treatment for medical as well as surgical ailments in hospitals.

Certain of these conditions afford much food for serious thought, as they are of great economic importance to the medical profession, but I cannot pause to discuss them on this occasion, save to remark that new and rewarding opportunities and a new mission of service are opening to properly trained physicians in the great fields of public hygiene and preventive medicine. It is a serious defect of our medical schools in general that they do not at present provide adequate training for work of this character.

The outlook for improvement of medical education in this country is most encouraging. We already have a few excellent medical schools, comparable with the best in Europe, and the general average is rapidly advancing, so that we need not despair of attaining conditions of medical education which shall cease to be a reproach to us. The reform of medical education in this country is moving forward by the aid of many agencies and influences, and when its history is written the work of the Council on Medical Education of this Association will fill an important chapter.

The City of St. Louis to-day offers in the reorganization of the medical department of Washington University the finest possible example of improvement in medical education and the way to accomplish it. This medical school, aided by splendid gifts of enlightened benefactors and by the affiliation of a group of admirable hospitals and broadly planned with clear recognition of the needs of modern medicine, is destined to be among the foremost in this country and to exert a strong influence on medical education throughout the land, and especially in the middle West and South. I am sure that my colleagues of the American Medical Association desire me to extend, on this occasion and in this place in their behalf, our hearty congratulations and best wishes to Washington University and its medical school and to express to the donors our grateful appreciation of their generous benefactions to the cause of higher medical education and thereby to humanity.

ANIMAL EXPERIMENTATION

The Council on Defense of Medical Research is performing well a duty which we owe not only to the present generation, but to all who are to follow us, for there would be little hope for the future of medical education or the progress of medical science and art if medicine were deprived of the method of experimentation. This method, which from the nature of the subject matter must consist largely in experimentation on animals in the biologic and medical sciences, is for the science of medicine precisely what it is for chemistry and physics, its greatest lever of advancement. Observation and experiment are the warp and woof of the fabric of scientific medicine, the one as necessary as the other. Animal experimentation, however, differs from experimentation with inanimate matter in that it should never be undertaken without a serious purpose and a grave sense of responsibility to avoid the infliction of all unnecessary pain; and it is a fact that in no other use of animals for the benefit of man is equal solicitude exercised in this regard.

The antivivisectionists are engaged in an utterly hopeless undertaking in their attempts to convince the public that experimentation on animals is of little or no benefit to mankind. As all physicians know, these benefits are simply inestimable, and one is almost inclined to welcome an agitation which has afforded us the opportunity to present to the public conclusive evidence on this question in the admirable papers already published and in course of preparation under the supervision of the Council on Defense of Medical Research, which is doing a work comparable to that of the British Council on the same subject. These papers, issued in pamphlet form, have been widely circulated and are at the service of any one who desires to use them.

In their charges of wanton cruelty brought against physiologists and physicians, as well as in their efforts to demonstrate the inutility of animal experimentation, the antivivisectionists have long conducted an agitation unmatched for recklessness of statement, slanderous misrepresentation and deceit, unbounded credulity, and ignorance, through any personal knowledge, of the object of their attack or of its relations to the interests of science and humanity. The agitation for the prohibition of experiments on animals, conducted under the guise of an humane purpose, is fundamentally inhuman, for if it were to succeed the best hopes of humanity for further escape from physical suffering and disease would be destroyed.

Those who are familiar with the conditions of animal experimentation as practiced in this country and are most competent to judge are convinced that no further legislation relating to the subject is needed. No special legislation regulative of this practice and at all acceptable to those who seek such regulation has ever been proposed which is not open to serious objections as interfering with useful and proper experimentation and subjecting experimenters to unnecessary and intolerable restrictions, supervision and annoyance. The enactment of such legislation in Great Britain has been a stimulus rather than a quietus to continuance of the pernicious agitation and has been detrimental to the interests of medical science and art in that country. Vigilance in guarding against the enactment of legislation of this character in any part of this country is a duty which physicians owe to the science and art which they cultivate and to the welfare of the community.

MEDICAL AND HEALTH LEGISLATION

This Association as the representative of the medical profession of this nation cannot and should not be indifferent to legislation relating to important matters of public health and medicine, but the determination of the precise character and extent of its activities in this field is a question of considerable difficulty which we have not as yet fully and satisfactorily solved. The Association should assuredly keep aloof from politics in the customary significance of this term, and it should never resort to the arts of the politician. It should never appear in advocacy of legislative measures which are not clearly for the public welfare. Being a national organization, it should not intervene actively in state legislation, although here it may be helpful in an educational and advisory capacity. Its function and indeed its duty in relation to national legislation concerning health and medicine is to utter the voice of medical science as effectively as possible and to endeavor to have it heard by the lawmakers. It was entirely right and proper for this Association through its Committee on Medical Legislation to aid in the defeat of the antivivisection bill before Congress ten years ago and to support the passage of the Food and Drugs Act, the pensions for the widows of our medical heroes, Reed, Lazear and Carroll, the introduction of trained nursing in the army, the various public health bills, including the one now under consideration for a department of public health, and indeed, I believe, of every bill which this committee with varying success has advocated in Congress.

When Congress manifests such ignorance and indifference to urgent demands of sanitation as it did in framing the bill constituting the Isthmian Canal Commission, which took the fullest cognizance of the engineering problem and utterly ignored the equally important and not less difficult sanitary problem, the Association would have been culpable in not directing attention to the omission and in failing to urge the appointment as a member of the Commission of the eminent sanitarian whom I am proud to succeed in this presidential office, and who had already given proof that if any one could conquer the pestilences which had frustrated previous attempts to construct the canal, he was the man. And how well he has justified our faith by achieving the greatest triumph in practical sanitation in history!

The field of usefulness for this Association regarding legislation properly within its purview, includes, however, more than the advocacy or disapproval of specific laws already framed; it embraces likewise such matters as the collection of facts, legal opinions, historical data and information bearing on the questions concerned, the careful study of fundamental legal principles and of existing conditions in order to know what is right and also what is practicable, the examination of medical and sanitary laws, administration and activities in this country and abroad with a view to useful recommendations, the discriminating consideration of the powers and functions of the national government and of state and local governments respectively in the protection and promotion of the public health, cooperation with other agencies and efforts, especially those endeavoring to secure greater uniformity in state legislation by framing model laws relating to vital statistics, medical licensure, pure food and drugs, and the like, and the education of public opinion in support of laws for the common good, which are the only laws in which this Association has any interest whatever.

Since the establishment of the Bureau of Medical Legislation at the Association headquarters three years ago a good beginning has been made in constructive work of this character. The interesting and exhaustive discussion on a model law for the regulation of the practice of medicine at the joint conference of the Committee on Medical Legislation and the Council on Medical Education held in Chicago last March, while it constituted a most valuable contribution to this intricate and perplexing subject, brought out the lack of agreement on fundamental principles and forcibly exemplified the need of such preliminary work as I have indicated.

VITAL STATISTICS

The framing of a model bill for the registration of vital statistics, combined with the excellent work of the Committee on Nomenclature and Classification of Diseases, should greatly facilitate the extension of the area of registration of births and deaths in this country and improve conditions within the registration area. Vital statistics is the very foundation of sanitary science and of practical sanitation, and its neglect in this country has been as much of a reproach to us as our low standards of medical education. The Association and all the physicians of the country should do their best to remove this reproach as rapidly as possible. The intimate connection of accurate registration of births with public health problems may be illustrated by the emphasis justly placed upon it in the admirable reports of the Committee on Ophthalmia Neonatorum. This Committee, whose work is a great credit to the Association and has become an important factor in the stirring campaign for the prevention of blindness, is brought likewise into close contact with another serious legislative problem, namely, the regulation of midwifery practice.

DEPARTMENT OF HEALTH

Most gratifying is the awakening of sentiment beyond the confines of the medical profession in favor of the creation of a department of public health in the national government, of which this Association in its official action has long been an earnest advocate. It is especially significant that economists, experts in life-insurance, those interested in the industrial and social conditions of the laboring classes and others whose occupations and studies lead them to a realization of the enormous waste of life and energy from preventable diseases have espoused the movement for greater activities of the federal government in the protection of the people's health. The Committee of One Hundred, originating as a committee of the section of social science and economics of the Association for the Advancement of Science, which represents science in this country as our Association represents medicine, has done an important and patriotic service in educating public opinion and stirring up interest in this great cause.

I do not see how any intelligent and patriotic citizen who has studied the question can fail to reach the conclusion that the federal government should do far more than it is doing in the promotion of public health, and that such increased activity, properly directed, would be of incalculable benefit in the saving of human life, health and energy. I agree with the great majority of the members of this Association that the best way to secure this result is by the creation of a national department of public health. While it may be that a mature and detailed plan of organization for such a department has not yet been devised, the primary and essential thing is to demonstrate the need, and this, I believe, has been done. The Public Health and Marine-Hospital Service is already a partial bureau of health with an excellent hygienic laboratory, so far it has been developed. Its incorporation in a department of health would enable it to increase its functions and expand its usefulness. There are many suggestive analogies between the growth, functions and general plan of organization of the Department of Agriculture and the corresponding features of the proposed department of health and the argument for the establishment of the latter is stronger than was that for an agricultural department when this was formed.

Those who have been fighting for years the battles of public health in this country and have been discouraged by the indifference of our national legislators to this subject in its relations to the federal government have been inspired in the last few months by the appearance in the Senate of the United States of a champion of this cause, Senator Owen of Oklahoma, who, with an intelligent grasp of the significance of preventive medicine for the conservation of the human resources of the nation, has vigorously urged the need of further action by Congress in this direction, and has introduced a bill for the creation of a federal department of public health. The principles of this bill—and it is only on the principles, not the details, that Senator Owen himself lays importance—have been endorsed by the Committee on Legislation of this Association, the Committee of One Hundred, and a large number of eminent physicians, sanitarians and others who have interested themselves in the matter.

SECTARIAN MEDICINE

The introduction of Senator Owen's bill has been made the pretext for an attack on this Association of such a preposterous nature and led by interests of such a character that there is no occasion for our concerning ourselves seriously with it. We represent no school of medicine and no system of healing, allopathic, old, regular or other. We are simply physicians, as chemists are chemists and physicists are physicists, seeking to advance the boundaries of medical knowledge and to base, so far as possible, the practice of our art on scientific principles and sound experience. Our concern with the legal regulation of the practice of medicine differs in no respect from that of the rest of the community and is merely that those who assume to practice the healing art as a profession shall have some adequate knowledge of the human body in health and in disease. While we know, as all men of science must know, that there can be no dogma, principle, system or method universally applicable to the treatment of disease, we are aware that new knowledge may come from the most unpromising sources, and we are eager to discover what good there may be in the claims of the advocates of any peculiar system of treatment; and if such is found, there is nothing whatever in our principles to prevent us from adopting it, or, in fact, from employing any method of cure which the physician may deem best. We have no intention or desire to interfere, even if we could, with the freedom of the individual to employ any one or any method of healing he may please, so long as the interests of public health are not endangered thereby. Incredible as it may seem to those whose vision does not extend beyond personal and commercial interests, we are engaged in the campaign for public health from purely altruistic motives, for we hope the day is not far distant when there will be less disease to demand the services of physicians.

The idea that a federal department of health could have anything whatever to do with the regulation of the practice of medicine throughout the country merely betrays abysmal ignorance of the constitutional principles of our government. Of the two great divisions of medicine, it is only with the curative that sectarian medicine has concerned itself, while to the preventive side, where our great conquests lie, it has contributed nothing. It is not surprising that the better representatives of sectarian medicine, realizing the false position in which it has been attempted to place them, should have hastened to disclaim any connection with the grotesque movement organized to defeat the creation of a federal department of health on the ground that it is favored by the great body of physicians of this country represented in this Association.

INTERNATIONAL CONGRESS OF HYGIENE

Had time permitted I should have been glad to speak of other activities of the Association, particularly the somewhat scattered ones in the field of public hygiene. Here I shall only remind you that the important International Congress of Hygiene and Demography, which is to meet in this country in 1912 on invitation of the government, will doubtless be of great interest and should give a powerful impetus to the movement for better sanitary administration throughout the country.

GEORGE WASHINGTON MEMORIAL ASSOCIATION

The difficulty of housing such a congress in the national capital and our experience in this respect in caring for the International Congress on Tuberculosis in 1908 bring home to us forcibly the importance of aiding the efforts of the George Washington Memorial Association, already endorsed by this Association, to provide in the City of Washington a suitable building containing halls, lecture rooms and a large auditorium for the accommodation of national and international congresses.

NEED OF ECONOMY

My service for six years as a Trustee of this Association leads me to remind the members that our funds are relatively small in comparison with the fields of usefulness which we would like to cover. This condition necessitates careful consideration by the Delegates and the Trustees of the numerous proposals in order to select those which seem to belong most properly to the sphere of the Association and are not adequately provided for by other agencies, and of these to choose the ones which appear to be most important and most urgent and to give promise of the most rewarding results. Experience has shown that the best returns are obtained from systematic, centralized work continuing over a number of years.

SECTIONS AND SCIENTIFIC EXHIBIT

While I have devoted the larger part of this address to the consideration of certain subjects of wide professional and public interest which have properly engaged the attention of the Association in its capacity of national representative of the great body of physicians of this country, it should never be forgotten that the main purpose of this organization is that which is placed first in our constitution—the promotion of the science and art of medicine. All of the activities should center around this purpose and be contributory to it. These central educational and scientific functions are most effectively served by The Journal and by the meetings of the various Sections at the annual sessions. It is these more than aught else which interest the members of the Association and which hold the organization together. Their development and success should always be the first thought and highest endeavor of the Association.

The scientific exhibit, under the energetic, self-sacrificing direction of Dr. Wynn, to whom the Association owes a large debt of gratitude, has grown into one of the most useful, attractive and instructive features of our meetings, with promise of even wider and more varied scientific and educational value. It has already gained a position which, to say the least, is coordinate in interest and importance to a section, and it should receive every possible encouragement and support from the Association.

ORGANIZED EFFORT

Organized effort is a distinguishing mark of modern civilization. It is as essential for the advancement of science, of education, of social and industrial reform, of philanthropic endeavor, as for the promotion of commerce. With the remarkable progress of medical science, especially during the last three decades, man's power to control disease has been vastly increased, and the sphere of usefulness of the physician has been correspondingly widened, and with advancing knowledge will continue to expand. The skill and knowledge of the physician and sanitarian have acquired a new and ever-increasing importance and significance in the movements for social amelioration, for improvement of the conditions of labor and of living, for the conservation and most efficient utilization of the productive energy of the world, and for the reclamation of regions now yielding no return to civilization.

Among the organized forces for advancing the prosperity, the happiness and the well being of the people of this country, the American Medical Association has an important part to play. We are justified in the confidence that, with the united support and loyalty of the profession, this Association, broadly representative and standing for the best ideals of medical science and art and for professional and civic righteousness, will contribute a beneficent share to the working out of our national destiny.

807 St. Paul Street.

THE IMPORTANCE OF THE EUGENIC MOVEMENT AND ITS RELATION TO SOCIAL HYGIENE*

LEWELLYS F. BARKER, M.D.
Professor of Medicine in Johns Hopkins University and Physician-in-Chief to Johns Hopkins Hospital
BALTIMORE

> "Like leaves on trees the race of man is found,
> Now green in youth, now withering on the ground;
> Another race the following spring supplies
> They fall successive and successive rise."

If it be true that the whole human race gets a fresh start at least thrice every hundred years; that the kind of race in existence in any period depends on the quality of the children born and the influences to which they are exposed after birth; that the supreme reason for marriage is parenthood; that the quality of children born depends (1) on the elements inherent in the germ-cells of the parents, and (2) on the environment of those germ-cells before their union and also after their fusion to form a new being; that a critical study of the relatives of a prospective parent will give valuable evidence regarding the nature of the elements—good, bad and indifferent—inherent in his or her germ-cells and likely to be transmitted; that poisons like alcohol, lead, or the toxins of syphilis circulating in the blood of either parent before a germ-cell union, or and more especially, in the blood of a mother before the birth of her child, may make the offspring the victim of malformation, infantilism, mental defect or epilepsy—if these things be true I think it probable that it would be possible and wise to interest young and marriageable people in the facts, and to a certain extent consciously to direct selection by marriage, and further, consciously to protect from injury germ-cells which possibly may fuse, or have already united to form a new human being.

CREATE PUBLIC OPINION

If it be true that the quality of human beings born depends on the inherent qualities of the germ-cells of the parents and their environment before and after fusion, may it not be possible by education to cultivate a public opinion that will lead families to show as much pride in making provision for characteristics of health, energy, ability, courage and courtesy in their posterity as some of them now evince in their ancestry? May not family sentiment be developed in the direction of suppressing parenthood in the racially unworthy and of facilitating fatherhood and motherhood for those who are able to transmit to their offspring desirable qualities unhampered by glaring defect? In the words of Zarathustra, may we not say to the family: "In the future let not your pride be whence ye have come, but whither ye go."

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* Read before the Maryland Society of Social Hygiene, April 19, 1910.

If it be true that those born deaf and dumb, or feeble-minded, or with an insane or epileptic tendency, or color-blind, are likely to propagate their kind; and if it be true that the chronic inebriate, the prostitute, the drug habitué and the habitual criminal are, as a rule such because of the nervous systems they have inherited, and that they are likely to transmit defective nervous systems to their offspring, it would be desirable to educate public opinion, not only to discountenancing, but actually to legislative prohibition of parenthood for individuals so afflicted.

THE FIT AND THE UNFIT

If it be true that the decline and fall of nations following from no apparent external causes is really explicable through "the relative fertility of the fitter and unfitter elements combined with what we now know of the laws of inheritance;" if it be a fact that the success of a people usually leads to a cessation of natural selection within that people, and hence is often followed by survival of the worse; if we can be convinced that by applying scientific knowledge it would be possible to stem racial decadence and determine a racial ascent, surely there could be no more laudable, patriotic movement than one which will help a nation in its struggle by seeing to it that the children of that nation have their origin in the fusion of the better germ-cells available, and that those germ-cells and those children are protected from the injury which results from undernourishment or from the action of such racial poisons as alcohol, lead, and the toxins produced by infectious agents. We do not have to look far afield to observe that certain of the civilizations in existence today are trying to apply every scrap of biologic knowledge which they believe will help them in the struggle; woe be to the societies and nations which fail to apply this new knowledge as it accumulates; the fate of such negligent or non-compliant communities is sealed; they are making no proper effort to postpone the time when they will be "one with Nineveh and Tyre."

If it be true that as the human race advances and the range of intellect widens, the tendency is to work for the future of humanity as well as for its present good; if, from the time of Plato to our day, the best minds have cherished the idea of a more perfect state, and have urged the suppression of human baseness and the creation and the appreciation of a "super-man;" if modern science has placed in our hands the key which unlocks the box containing the secret of race-ennoblement, namely, the picking out by preference of the racially superior for parenthood combined with the protection of childhood and the support of maternal care by fatherhood—if these be facts, then the phenomena of sex may ultimately come to be regarded by more people with awe; parenthood will be looked on as the noblest and most sacred of functions, entailing the heaviest responsibilities, and "the science which deals with all the influences that improve the inborn qualities of a race" (Mr. Francis Galton's definition of eugenics), will become a constituent of the higher human religions.

EUGENICS

The science which has for its object the prevention of the birth of the unfit and undesirable, and the improvement of the race by furthering the productivity of the fit and the desirable by early marriages and by healthful rearing of children, has been called by Mr. Francis Galton, whose life has been devoted to a campaign in favor of it, the science of eugenics. Whereas, natural selection depends on overproduction and wholesale destruction, the aim of eugenics is to see that no more children are born than can be properly cared for and to make sure that those born come of the best stock. This science assumes that it is possible to improve the race by the application of the newer knowledge which modern studies of heredity and environment have yielded.

Until recently young people approaching marriage have had no way of obtaining definite information concerning fit and unfit matings and many of them have never been taught to consider whether or not a proposed marriage would lead to the birth of children with healthy bodies and sound and able minds. Students of heredity and of hygiene are now making the effort to supply the much-needed information and we must be grateful for the various publications which have recently attempted to present in a popular way the existing state of our knowledge concerning these vital matters. For those who wish to begin a course of reading along eugenic lines I would recommend:

C. W. Saleeby: "Parenthood and Race Culture: An Outline of Eugenics" (New York, 1909).

W. Bateson: "Methods and Scope of Genetics" (Cambridge, 1908) and his "Mendel's Principles of Heredity" (Cambridge, 1909).

T. H. Morgan's "Experimental Zoology" (New York, 1907).

C. B. Davenport: "Eugenics: The Science of Human Improvement by Better Breeding" (New York, 1910).

Karl Pearson: "National Life from the Standpoint of Science" (Edinburgh, 1905).

R. R. Rentoul: "Race Culture or Race Suicide" (Edinburgh, 1906).

In the first book mentioned references will be found to the more technical sources, including J. A. Thompson's Heredity, Francis Galton's publications, Westermarck's "History of Human Marriage" and Forel's "The Sexual Question."

PUBLIC INTEREST IN EUGENICS

There is now in existence in England a Eugenics Education Society, and the publication of a *Eugenics Review* has been begun. In this country the American Breeders' Association has organized a Committee on Eugenics for purposes of investigation, education and legislation. In Germany there is an excellent journal called the *Archiv für Rassen-und Gesellschafts-Biologie.* It seems probable that eugenic societies, eugenic committees and eugenic publications will rapidly multiply, and it is not at all improbable that wise philanthropists, seeing that the millions of dollars now used for caring for the weak and defective help only one generation, will soon be induced to provide large sums for eugenics, with the idea of preventing the production of the imbecile, the insane, the inebriate and the criminal.

MENDELIAN LAWS

My purpose now is not to dwell at any length on studies in heredity or the various theories which have been devised to interpret its phenomena. There have been, however, certain developments in the study of heredity to which as yet popular attention has been insufficiently drawn; I mean the rules regarding inheritance which have resulted from the experimental studies begun by the Abbot Gregor Mendel in the cloister garden at Brünn about a half century ago. For a time it seemed possible that these studies held good more particularly for the life of plants and of lower animals, but of late there has been a rapid accumulation of evidence which makes it seem certain that the Mendelian rules are also valid, at any rate to a large extent, for the higher animals and man. It now seems probable that inquiries into the physiology of heredity and variation will progress largely by the application of experimental methods similar to those which grew out of Mendel's discovery.

For a long time it has been known that most animals and plants begin life by the union of two cells, the one male, the other female. Biologists describing those cells call them gametes; that is, germ-cells or marrying-cells. These germ-cells contain in some way or another the factors on which all the powers, both physical and mental, possessed by the living creature to which they give rise, depend. It was Mendel who first appreciated the full consequences of the double nature of each individual being, due to the fact that two cells are concerned in its production. To understand the facts of heredity it will no longer do to think of a boy or a bee or a beech-tree as each being one thing, but we must think of each of them as being two things, indeed, as being double in composition throughout.

It is no uncommon experience to see the attempt made in families to analyze each individual into the aggregations or mixtures of parental characteristics manifest in them, to recognize, for example, the mother's voice, the father's passion for music, the mother's eye or the father's bony frame-work. But scientific students of heredity teach us that such an analysis, while true, since the various characters are transmitted independently, misses the most important point; namely, that in each of his qualities an individual is double. To understand really the make-up of an individual it is necessary to know how each of the two original germ-cells which united to give rise to him was endowed, as regards the factors concerned in voice, skeleton, musical faculty, color, hair and other characteristics. In analyzing the inheritance of a human being, therefore, we have to consider the contribution of each of his parental germ-cells separately for each quality or faculty; in other words, it is not sufficient to make a single column of values for the ingredients that go to form a man, but, as Bateson suggests, we must rule two columns, one for the ovum from the mother and one for the sperm-cell from the father, and in each column we must indicate how that germ-cell was supplied in respect to each of the ingredients in the list. Now, it will be clear that the male and female germ-cells may make the same or different contributions as regards any of the ingredients. When the two cells yield the same contribution the organism which results is said to be *pure-bred* for that ingredient; on the other hand, when the contribution from the two parent cells is dissimilar, the organism which results is said to be *cross-bred*. This is one of the most important conclusions to which studies of heredity has led.

From what I have said it will be clear that an individual according to our present views of heredity, is made up of a large number of distinct ingredients or units contributed from two sources and that as regards any one of these units he may have inherited two similar portions or two dissimilar portions.

To proceed with the analysis, I think I cannot do better than adopt an illustration used by Bateson in his popular address. He imagines the contents of a germ-cell as a fluid, made by taking a drop from each of a definite number of bottles in a chest containing tinctures of the several ingredients. Thus the male germ-cell is supposed to be compounded from one chest of bottles and the female germ-cell from a corresponding set of bottles in a similar chest. Should one or more of the bottles be empty in either chest then the germ-cell receives no ingredient from that chest; if corresponding bottles should be empty in both chests then neither germ-cell contains the ingredient concerned and the new individual resulting from the union of the two germ-cells by mixing the two collections of drops together would not contain the missing ingredient at all. It is obvious that an individual may be pure-bred (that is to say, similar on both sides of his composition) for any particular ingredient in either one of two ways; he may have received the ingredient from both the male and the female chest, or he may have received it from neither. Again, he may be cross-bred in respect of any single ingredient or unit, receiving the presence of it from one germ-cell and the absence of it from the other.

Having got this far, we can now conceive of the individual as composed of what are called presences and absences of all the possible ingredients. Hurst's studies of the eyes of parents and children happily illustrate this point. It appears that people have blue eyes when a factor or unit which forms pigment on the front of the iris is absent. If both parents of a child have blue eyes the children will not have dark eyes, for a dark eye has been shown to be due to either a single or a double dose of the unit missing from the blue eye. This is why dark-eyed persons may have children who are all dark-eyed or who are dark-eyed and light-eyed in certain proportions which, on the average, are definite.

The long hair in angora cats or in guinea-pigs seems to be due, not to a factor added to short hair, but rather to the absence of a unit which stops growth in short-haired animals.

It is too early as yet to offer any opinion as to the actual nature of the factors we are now talking about. Some time we may know really what they are, but as yet we are in ignorance.

PRINCIPLE OF SEGREGATION OF UNITS

Having described the formation of an individual from units brought into him by the two germ-cells derived from his parents, we may now turn to an examination of the mode of formation of the germ-cells which are formed in him himself and which will be concerned in his contribution to his children should he have them. It will be interesting to see how the various ingredients of which he himself was originally compounded are distributed among the germ-cells which are budded off from him. The observations which have been made teach that except for rare variations the germ-cells formed from him are all alike in respect of those units of which he is pure-bred. This might have perhaps been expected, but the constitution of his germ-cells in respect of the units of which he is cross-bred—I mean those units which he received from the germ-cell of one parent and not from that of the other—could scarcely have been foreseen. In the cases thus far studied experimentally in animals and plants some of the germ-cells from such individuals contain a representation of the unit and others do not, just as the parent germ-cells did or did not contain it. This fact, known as the principle of segregation of units (or determiners), is the most important discovery made by Mendel.

We now see that if a certain *unit* were brought in by both parent germ-cells, then all the daughter germ-cells have it; if it did not come in through either parent germ-cell, then no daughter germ-cell will have it; if it came in through one parent germ-cell and not through the other, then about half the daughter germ-cells will have it and about half of them will not. In other words, the individual made by the mixing of tinctures from two chests of bottles sorts the tinctures back again into a double row of bottles, a pair corresponding to each ingredient or unit, and each of the germ-cells budded off from him receives a drop from one or other bottle of each pair. This is what is known as the purity of germ-cells. "They are pure in the possession of an ingredient or in not possessing it; and the ingredients or factors, as we generally call them, are units because they are so treated in the process of formation of the new gametes and because they come out of the process of segregation in the same condition as they went in before fertilization." (Bateson.)

TYPES LIMITED

Two given parents can therefore produce only a limited number of types of offspring; the relative numbers of the types thus produced by recombinations of the parental units can often be predicted according to simple mathematical rules.

If we could know the unit characteristics which both parents possess as well as those which they both lack, and also the unit characters in which they differ, and if we further knew for each characteristic whether it was due to a presence or an absence, we could go far toward predicting the result of a particular marriage. Of course we are as yet only on the threshold of such knowledge. It is often very difficult to tell whether a parent possesses a given factor or not, but for some characters it is quite easy and can be told at once, since there are factors which cannot be present in an individual without manifesting their presence. In some families, for example, a certain number of the members are affected by night-blindness. If an individual affected marries one unaffected, their children will be partly affected and partly unaffected, but their unaffected children in turn, not containing the unit responsible for night-blindness, cannot pass it on.

COMPLEMENTARY UNITS

Through the study of pedigrees, but more particularly through experimental studies, our knowledge of Mendelian heredity is slowly progressing and very astonishing answers are being obtained to the questions which scientists are putting to nature.

Certain bodily characteristics seem to depend, not on a single ingredient or factor, but on the combined activities of several factors—the so-called *complementary units*. Thus in mice, if only one color factor is present the fur is chocolate; if another factor in the series be added the fur becomes black, and if a third factor concurrently act, the fur has the brownish-gray color of the common wild mouse.

INTERACTIONS AND REPULSIONS

Students of heredity have also found that units of different nature sometimes interact with one another during cell division. There seem to be, for example, mutual repulsions among Mendelian units, and if an individual is cross-bred in respect of two repelling factors, that is, if he has received only a single dose of each, then the germ-cells budded off from him are so composed that each contains one or other of the two repelling factors; not both. This fact has been beautifully demonstrated by the studies of Bateson and Punnett on the hybridization of sweet peas.

HEREDITY AND DISEASE

Observations on human beings show the importance of studies of heredity, not only for the understanding of normal life, but for obtaining an insight into the prevalence of abnormalities and of disease. In some families the hands have short fingers, each digit having only two instead of three phalanges.[1] The abnormality appears to be due to the presence of a Mendelian unit which inhibits the normal process of growth in the fingers. A short-fingered person married to a normal person will have children all or half of whom are short fingered; should two individuals, however, even though derived from short-fingered strains, be themselves free from short fingers, their child will be normal. The same rule in all probability applies to diabetes insipidus.

Sometimes an abnormality or a disease is due to the absence of a Mendelian unit rather than to an abnormal presence. In some families the lining membrane of the eye undergoes a pigmentary form of degeneration. Here not only members of the family affected with the disease may transmit the disease to offspring, but even those with good eyes may have children suffering from the pathologic change. The same is true of deaf-mutism. In the disease of the eye just spoken of and in deaf-mutism it is exceedingly dangerous for an affected person to marry a blood relative even if that relative does not suffer from the same defect.

IMBECILITY

Imbecility, in certain of its forms, appears to be due to the absence of some definite simple factor. If two imbeciles marry, even though they be unrelated to one another, the offspring are all imbeciles. I need only refer to Barr's case in which an imbecile of thirty-eight married a delicate wife and twenty years later was the father of nineteen defective children. Davenport states that he can find no case on record in which two imbecile parents have produced a normal child, and yet thousands of children are born every year in this country of imbecile parents. One can only think it will not be long, in view of this, before imbeciles will be restrained from reproducing their kind. The family of hereditary ataxics studied by Dr. Sanger Brown, the brains of two members of which I have studied and made a report on, illustrates well the baneful propagation of a bad stock.[2]

If time permitted statistics could be given regarding the insane, the epileptic, the chronic inebriate and the habitual criminal which would convince anyone that such persons should never become parents, and would cause to be initiated a movement to awaken public opinion and legislative action in these matters.[3]

RESISTANCE TO DISEASE

While studies of heredity show us the direction in which we must work on the negative side, they are also full of promise on the positive side. One of the most fascinating investigations with which I am familiar is that of Biffen[4] which led to the demonstration that the power to resist a disease may depend on the presence in a germ-cell of one of the simple Mendelian units to which I have been referring. It has long been known that certain kinds of wheat are very susceptible to a disease known as wheat-rust which is due to an infection with a fungus. Certain other varieties of wheat are immune to this rust disease. If an immune strain be crossed with one which is not immune, the resulting hybrids are all susceptible to rust, but when such hybrids are permitted to undergo self-fertilization they yield seeds from which appear susceptible and immune plants in the ratio of 3:1. This little experiment gives an entirely new and precise significance to what we have hitherto designated as resistance to disease; it is conceivable that a field of research has here been opened up which may yield results of great practical as well as theoretical value. It is quite conceivable that what has been found to be true in this case may turn out to be true of resistance to many other diseases in both plants and animals; and who knows but that before long the attention of medical science will be turned less than at present towards modes of infection and more than now toward the breeding of a race with heightened resistances? Indeed it seems now far from being impossible "that liability to a disease or the power of resisting its attack, addiction to a particular vice or to superstition," may be found to be "due to the presence or absence of a specific ingredient and that these ingredients are transmitted to the offspring according to definite predicable rules."

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[1] Cf. Farabee, W. C.: Inheritance of Digital Malformations in Man, Cambridge, 1905; Walker, G.: Remarkable Cases of Hereditary Anchyloses or Absence of Various Phalangeal Joints, etc., Bull. Johns Hopkins Hosp., 1901, xii; and Drinkwater, H.: An Account of a Brachydactylous Family, Proc. Roy. Soc., Edinburgh, 1908, 35.

[2] Barker, L. F.: Description of Brain and Spinal Cord in Hereditary Ataxia. Decennial Publications, University of Chicago, 1903.

[3] Cf. Bateson, W.: An Address on Mendelian Heredity and Its Application to Man, Brain, 1906, xxix, 157.

APPLICATION OF EUGENICS TO RACE CULTURE

The science of eugenics aims to make use of all these newer facts of heredity as well as those resulting from statistical or biometric inquiries, and to apply them in race culture. It will not, however, neglect the very important influence of environment, and must pay especial attention to the rôle of racial poisons like alcohol, lead and the toxins of syphilis. Time will not permit me to dwell on the obstacles in the way of eugenic progress, nor can I even refer to all the methods proposed by those who harbor the eugenic ideal. It seems to me important, however, to point out that certain of the methods recommended by enthusiasts for the improvement of the race would, if resorted to, be likely to be more harmful than useful. It seems to me probable that the new facts of heredity may be applied best through the utilization of the institution of marriage. I do not think it probable that any method incompatible with marriage, with the love of the sexes, or with the care of the children chiefly by their own parents, will be adopted at any rate in the near future. The suggestions of Plato, of Malthus, of Spencer and of Nietzsche, though important in certain directions, were all fallacious in others. It is highly probable that some of the views most generally held to-day will not bear the test of time, but, despite this, we have enough certain knowledge to permit us to do much toward the elevation of mankind by eugenic methods. Though the birth-rate is decreasing, the population of the world is increasing. Though one-third of the infants born die within five years, great strides are being made in the prevention of infant mortality. It is not necessary to foster infant mortality in the hope of removing the unfit. It is much more important to prevent the birth of the unfit. By understanding Nature and obeying her we shall learn to command her. Most of the illegitimate children now born die soon after birth. The majority of undesirable citizens do not propagate their kind, even under our present social arrangements. Selection by marriage, faulty as it is, has on the whole favored the improvement of the race. Women are becoming freer to choose husbands than ever before and social opinion regarding the length of time of engagements and the prevention of unfit matings is becoming ever more enlightened. It might be advantageous if women especially suited for motherhood were made financially independent by the state. So-called codes of honor found to be wrong are being abandoned. More and more provision is being made for the permanent detention of inebriates, insane, the feeble-minded and criminals; parenthood will be more and more prevented among these degenerate individuals, by permanent detention, or possibly, as has been seriously recommended and practiced by some, by surgical or x-ray sterilization. Young people are being educated better than before as to the significance of sex and the responsibilities of parenthood, of the dangers of racial poisons, and especially of the risks of venereal disease. With the help of the Wassermann reaction it is now possible to find out whether an individual who has once had syphilis has been sufficiently treated to prevent his transmission of the disease to a conjugal partner or a child.

HEREDITY NOT A BUBBLE

One fact is outstanding; heredity is *not* a "mere bubble to be pricked," despite the cleverness of Mr. Bernard Shaw. Through our knowledge of its laws we shall be able to progress toward the better part of the ideal of Nietzsche, who longed for the highest perfection of man. As a practical advisor for the attainment of this perfection Nietzsche may not have been wise, but no one could have had a higher aim. Thus spake Zarathustra: "Hitherto all things have brought forth something better than themselves, are you going to be the ebb of this great tide? Man is something that is to be surpassed. Thou, the victorious one, the self-subduer, the commander of thy senses, thou shalt build better than thyself. But thou must thyself be built square in body and soul. Thou shalt create a higher body, a prime motor, a self-rolling wheel; thou shalt create a creator."[5] Similar views have been expressed by one of the greatest of our American poets. What could be more eugenic than this striking passage?

> Lead the present with friendly hand towards the future—
> Bravos to all impulses sending sane children to the next age!
> But damn that which spends itself with no thought of the
> stain, pain, dismay, feebleness, it is bequeathing! . . .
> I see tremendous entrances and exits, new combinations, the
> solidarity of races—
> Always a nonchalant breed, slightly emerging, appears on
> the streets,
> Arouse, for you must justify me!
> Not to-day is to justify me and answer what I am for,
> But you, a new brood . . . greater than before known . . .
> Great idea, idea of perfect and free individuals!

EUGENICS SHOULD BE STUDIED

Fragmentary as has been this presentation, I trust that it may stimulate thought regarding the eugenic ideal; I hope that the subject will be studied and that people may become instructed in it. In becoming thorough eugenists, we shall act in accordance with the highest aims and purposes of all persons interested in true social hygiene. Though the old doctrine of predestination gets new support from the recent studies, these studies also teach us how mankind can control its destiny. It will be absolutely necessary to attack the problems of (?) the improvement of races and families and (?) the extinction of hereditary disease in the one single way in which permanent betterment is possible. We must more consciously control the union of germ-cell qualities, and we can do this by creating new sentiments regarding marriage and parenthood. In these problems lie, it seems to me, the most important and the most difficult tasks now confronting families, nations and the human race!

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[4] Biffen, R. H.: Studies in the Inheritance of Disease—Resistance. Jour. Agric. Soc., Cambr., 1907, ii, 109.

[5] Mügge, M. A.: Friedrich Nietzsche; His Life and Work, London, 1908.

1035 North Calvert Street.

A STUDY OF TRANSILLUMINATION *

PERCY FRIDENBERG, M.D.
NEW YORK

The data presented in this paper were gained by clinical observation of a large number of normal and diseased eyes in adults, children and infants, transillumination of enucleated globes in the rich and varied collection of the Pathological Laboratory of the New York Eye and Ear Infirmary, and experiments with globular artificial eyes filled with blood, serum, fibrin and various colored fluids. In the last two categories, the possibility of controlling and proving the facts determined during transillumination was of great practical value. The results were such as to corroborate, in the main, what clinical ophthalmology has taught us in regard to the optical reaction of various intra-ocular structures to light transmitted through the sclera; yet a number of instructive and interesting as well as novel exceptions were encountered which will be considered somewhat in detail later.

Both the Sachs and Würdemann lamps were used throughout; the examinations being conducted in a dark room and sometimes exclusion of light was further effected by the use of a black rubber sheet over the head of the examiner and subject. Examined in this way, the normal sclera was always found to be uniformly translucent, something like the web of the fingers when held up to bright light.

In enucleated eyes this trans-scleral glow clearly outlined the entire globe and appeared at the pupil as a *bright red reflex*. The latter was most intense when the transilluminator was placed at the posterior pole, and the rays came directly forward toward the eye of the observer, or when it was placed over the ciliary body, and the pupil inspected obliquely from the opposite side. The latter is, of course, the only way in which bright illumination can be obtained *intra vitam*. The cornea offers, as might be expected, no obstruction whatever to transmitted light. It is somewhat surprising, however, that corneal opacities, no matter where situated or how dense, seem to melt away and give passage to a bright glow. Old leucomata can be transilluminated with ease, allowing us to make out the position and topography of the pupil.

Dense pannus, of recent formation, tends to obscure the reflex slightly. This is probably due to the presence of blood in the newly formed corneal capillaries, as old, obliterated blood-vessels have no such effect. Deposits of uveal pigment on the cornea, as elsewhere in the eye, act as an absolute barrier to light from the transilluminator, so that we have in this instrument a very effective means of differentiating fibrinous or purulent deposits from those containing chromatic granules. The lens, whether clear or opaque to oblique illumination, is absolutely transparent to transillumination, so that not only nuclear, polar, cortical and capsular opacities, but mature senile cataract, as well, seem to have disappeared. In siderosis affecting the lens I have observed some dimming of the light, but this was by no means marked. Cataract, accordingly, offers no obstacle to the detection of an intra-ocular tumor, or possibly of a foreign body, by transillumination.

The true stop or diaphragm for transmitted light is the pigment in the uveal layer of the iris and ciliary body. That in the chorioid is so scattered as not appreciably to affect the rays. The normal iris is absolutely opaque. I have not been able to find any difference between light blue or gray and brown or black eyes, in this respect, nor is there any appreciable difference between the dense ciliary body and the thinner iris. Uveal pigment deposits on the lens, similarly, obstruct the light and appear quite black, no matter how small or thin. In many diseased states of the iris the pigment layer disappears and the light then comes through the stroma of this tissue as brightly as it does through the clear pupil. In many cases of atrophic iris, as in chronic glaucoma, there is a marked reticulation with the appearance of cribriform or accessory pupils.

Secondary membranes after cataract extraction obstruct the light only when they contain dense blood-clot or uveal pigment. In recent intra-ocular hemorrhage there is slight dimming of the light, and a blood-clot entirely arrests it. This was seen most unmistakably in old subretinal hemorrhage and in organized clot in the vitreous. Detached retina is absolutely transparent.

The differentiation of this condition from intra-ocular tumor, particularly from sarcoma, is one of the most important applications of transillumination. As is well known, melanosarcoma casts a dense shadow. This may often be seen as a dark area at the site of the new growth, as well as by dimming of the pupillary glow. It has been claimed that unpigmented sarcoma does not show by transillumination, but at least in one instance I was able to disprove this statement by eliciting a very manifest shadow over a deep-seated leucosarcoma of the chorioid. In the absence of any macroscopically evident pigment—the tumor appeared as a dense white mass—we must assume that the irregular arrangement of tissue cells is sufficient to obstruct the passage of light. Translucent or transparent structures, such as the sclera, cornea and lens, are composed of tissue elements arranged parallel and at right angles to the rays of light which traverse them. An irregular arrangement will naturally obstruct light to some extent even if no pigment be present. Glioma of the retina is always transparent, but the presence of bony or calcareous changes is invariably indicated by opacity.

Transillumination gives no indication whatever of the circumlental space. The annular bright area immediately beyond the limbus depicted in the article by Würdemann is due to light rays which traverse the anterior chamber and come through the thin sclera about Schlemm's canal. It is only seen when the transilluminator is applied obliquely and well forward. When the light comes from the rear, the circumlental space disappears completely in spite of brilliant transpupillary reflex. Again, the appearance and dimensions of this light ring are unaltered by gross changes which not only

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910

alter, but completely abolish the circumlental space. Thus, in aphakia, there is no appreciable difference in the light ring from that seen in normal eyes. In buphthalmos and staphyloma of the cornea, the light ring may be seen to depend directly on the dimensions of the anterior transparent segment.

As the lens itself is quite pervious to light rays and, as we have seen, allows the brilliant reflex to pass through it even when completely cataractous, a delimitation of any circumlental space must be an optical, and hence, literally, a physical impossibility. Furthermore, the iris and ciliary body act as an absolutely impassable barrier extending from the pupil to the region of the ora serrata, so that no space within these limits could become visible externally. The comparison of a large number of glaucomatous eyes, before and after operation, with normal globes in patients of corresponding age has failed to reveal any differences whatever in the circumcorneal light ring.

In addition to its well-known uses for the detection of intra-ocular tumors and their differentiation from detachment and optically similar conditions, transillumination gives important information in many cases in which ophthalmoscopy is impossible, and oblique illumination alone teaches us little. This applies particularly to conditions associated with dense opacity of the cornea, such as staphyloma, extensive leucoma and occluded pupil. In dense leucoma with adherent iris, the size and shape of the pupil and the extent of its mobility under a mydriatic can be determined accurately. The site of an optical iridectomy, or the advisability of tattooing a corneal leucoma, may be determined in the light of transillumination.

This method may be combined with ophthalmoscopy for the examination of the ora serrata and neighboring ciliary region at present inaccessible on account of insufficient illumination due to the extreme angle of tilt which it is necessary to give to the ophthalmoscope mirror. With the combined method the structures far forward are seen beautifully.

60 East Fifty-eighth Street.

ABSTRACT OF DISCUSSION

Dr. Edward Jackson, Denver: The statement of Dr. Fridenberg that "transillumination gives no indication whatever of the circumlental space," is absolutely correct, and it is strange that the idea of such a connection ever gained credence. As I demonstrated before the Colorado Ophthalmological Society, at its meeting in December, 1908 (*Ophth. Rec.*, March, 1909, p. 128), the principles of optics render any connection of the circumlental space with this circumcorneal illumination impossible. The simple experiment shows that when the source of transillumination is back of the ciliary region no circumcorneal illumination occurs. Only when the tip of the transilluminator is brought forward, so as to light up the limbus on one side of the cornea, does the circumcorneal illumination appear on the opposite side. The circumcorneal ring is influenced by the absence of the lens, its dislocation or partial dislocation, or its congenital smallness.

Narrowing of the circumlental ring in connection with glaucoma does, I believe, occur. In an address before the Buffalo Ophthalmological Club a year ago (*Am. Jour. Ophth.*, December, 1909), I pointed out that this narrowing was associated with diminished depth of the extreme angle of the anterior chamber. It may also indicate sclerotic changes in the tissue surrounding Schlemm's canal, or pigment deposits in this region. Such narrowing certainly occurs in some cases of glaucoma. Possibly it may have significance as an indication as to the operation of choice in a given case of glaucoma, whether or not iridectomy is likely to give relief.

Dr. R. D. Gibson, Youngstown, O.: At the meeting of the American Medical Association in Boston I called attention to a form of transilluminator that I had to extemporize for the work we are often called on to do—the location of a foreign body. The tip of the illuminator was curved and had the lamp bulb in the end. This point can be inserted through a wound and the entire interior of the eye can be illuminated, or the point can be passed into any cavity. At the Boston meeting Dr. Würdemann, who followed me, presented his instrument, which is exactly the same, except that the light globe is placed at a different point. It is a handy instrument for emergency cases.

THE QUESTION OF ENUCLEATION IN PURULENT PANOPHTHALMITIS

WITH A BRIEF EXPERIMENTAL STUDY OF THE SUBJECT *

ROBERT L. RANDOLPH, M.D.
BALTIMORE

According to Becker,[1] forty-three cases of meningitis after enucleation of the eye had been placed on record up to 1888. The first two of these were reported by von Graefe at the Heidelberg Ophthalmological Congress in 1863, and he took occasion to warn against enucleation when the eye was in the active stage of an acute purulent panophthalmitis. With the exception of the contributions of Andrews[2] and George C. Harlan,[3] little or nothing on the subject has appeared in this country. The contributions of Leber and Deutschmann,[4] in Germany, are well known and are referred to by Andrews in his paper. Within the past twenty years, then, there has been no discussion of this interesting and practical subject, and I think that it is the first time that it has been brought before this Section. Since the above reports, others of a similar character have appeared now and again, as, for instance, that of de Lapersonne,[5] who reported a case in which the meningitis was due to the pneumococcus which was found in the sheath of the optic nerve and also at the base of the brain.

Some years ago a colleague of mine had a distressing experience with one of his patients, a child, who was struck in the eye by a piece of glass. Iridocyclitis followed and later panophthalmitis. The eye was enucleated, and three days later meningeal symptoms showed themselves and the child died. The utmost care was employed in the course of the operation and nothing was left undone which might have averted such a result. I recall a number of cases of purulent panophthalmitis in the hospital service of the late J. J. Chisolm. Prompt enucleation was the routine treatment with him for this class of cases, and I have seen some shocking looking eyes removed in the active stage of a purulent panophthalmitis and never with bad result, certainly not with fatal result. I must say, however, that I have no way of determining whether any untoward symptoms developed immediately after enucleation, symptoms which might be explained by a mild meningeal inflammation and which disappeared just as they sometimes do, without being sufficiently suggestive to alarm the surgeon or even to attract his attention. It seems to me important that those who make a habit of enucleating eyes in the active stage of a purulent panophthalmitis should keep such patients for several days after operation under the closest observation, with special reference to temperature and symptoms generally suggestive of meningeal involvement. It is quite possible for a mild meningitis to exist for a short time without being detected. It has been my rule to watch the temperature of all patients after enucleation, and I think I can say offhand that no temperature elevation followed. I speak now of eyes in which the inflammation was apparently confined within the eyeball. The conditions are different, however, when we consider an eye which is tense, full of pus, protruding and surrounded by engorged tissues, and generally this has been the picture presented in cases in which death followed the enucleation. It is in the hope of bringing out a full discussion that I bring the subject before this Section. It may be of interest to refer to discussions of this question before other gatherings of ophthalmologists. In 1888[6] the subject was up for discussion before the French society of ophthalmology. While Panas, Dufur, Motais and Gayet favored enucleation in these cases, Meyer, Galezowski and Abadie raised their voices against this procedure. According to Andrews, the late C. R. Agnew expressed himself as opposed to enucleation. In a discussion before the Ophthalmological Society of the United Kingdom,[7] Dr. Brudenell Carter, Mr. McHardy and Mr. Gunn favored enucleation, while Nettleship, Higgins and Mules were opposed to enucleation in such cases. It is evident from all this that there is much difference of opinion among able men on this point.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

1. Die Universitäts Augenklinik in Heidelberg, 1888.
2. New York Med. Jour., Dec. 29, 1888.
3. Trans. Amer. Ophth. Soc., 1879.
4. Von Graefe's Arch. f. Ophth., 1885, iv.
5. Echo méd. du Nord, Lille, 1897.

H. D. Noyes, in his text-book, states that from 1868 to 1888 there were 1,164 enucleations at the New York Eye and Ear Infirmary, and, of these, purulent panophthalmitis was present 161 times, and there was no fatal result. It is clear that one can practice enucleation in panophthalmitis a great many times without disaster; but when death has occurred it has nearly always been where the enucleation has been performed in the presence of a purulent panophthalmitis, especially when associated with great phlegmon of the orbital tissues. It would be interesting to get statistics of meningitis in those cases in which the eye had not been subjected to surgical interference. Cases of this character exist, as reported by Webster.[8]

EXPERIMENTAL DATA

The following experiments were undertaken to ascertain whether meningitis could be produced in some of the lower animals by first producing a purulent panophthalmitis and then removing the eye in the active stage of the disease. The animal was always etherized. The only instruments employed in the earlier experiments were a small hypodermic syringe and fixation forceps, which were boiled before using. The following case is an illustration of the behavior of the rabbit after operation, though in this, the first case, the animal died two weeks after enucleation:

Rabbit 1.—The eyeball was pulled forward and downward and the conjunctiva was dissected away, leaving the sclera bare at a point about 2 mm. behind the lens. Five minims of a suspension of *Staphylococcus aureus* were injected into the vitreous. The next day the anterior chamber was cloudy and the eyeball was intensely red. On the third day there was a typical picture of purulent panophthalmitis so the eye was enucleated. The animal declined and died two weeks later but the autopsy showed nothing abnormal in the brain.

Rabbit 2.—Jan. 17, 1909, a rabbit was inoculated in the same way and in three days purulent panophthalmitis was present. The eye was enucleated on the fourth day. The effect of the operation was negative and the animal died five weeks later from an injury received in transferring it from one part of the building to another.

Rabbit 3.—Feb. 2, 1909, I inoculated the right eye of a rabbit just as in the other two cases. The reaction seen next day was positive but less pronounced than in either of the preceding cases. There was cloudy vitreous with pericorneal redness. The condition subsided in large measure in a week, that is to say, the redness disappeared. Another injection was made in about the same place and this was followed by a sluggish inflammation of the retina and chorioid, leaving a picture which was strongly suggestive of the so-called pseudoglioma. Inasmuch as the organism employed seemed to have lost its potency through age, I injected a culture of the same organism of a 48-hours growth. This was followed by an intense panophthalmitis and on the third day the eye was enucleated. The experiment was negative.

Seven rabbits were treated in this manner and with the same result, and with the exception of the two mentioned all were living and well two months after the experiment.

Six guinea-pigs were subjected to the same experiment and the result in every case was negative.

Another series of experiments on rabbits was commenced. Instead of injecting a suspension of organisms an infected foreign body was introduced into the vitreous and allowed to remain there. The foreign body selected was a tack 1/4 inch long. A small incision was made in the usual location with a Graefe knife and the tack was pushed in with a pair of delicate forceps. Three of the tacks had been smeared with a pure culture of *Staphylococcus albus.* On the second day there was always iridocyclitis and on the fourth day typical panophthalmitis. The eye was enucleated at the height of the inflammation. Seven rabbits were treated in this manner and the result was negative in every case.

A new series was commenced and instead of using aseptic precautions the conditions surrounding the usual every-day accident were present. In six rabbits, a small piece of rusty wire 1/8 inch long was introduced into the viterous and in two rabbits a No. 5 shot. In every case purulent panophthalmitis followed and enucleation apparently had no effect on the health of the animal. In nine other rabbits particles of iron, pieces of glass and small fragments of copper wire, just the things which we see produce such disastrous results in human beings, were introduced and the results were negative. Generally speaking, the animal was a little depressed on the second and third day after operation (injection), but this had passed away by the time the enucleation was performed and with the exceptions noted were all alive and well after six weeks when the experiment was regarded as negative.

Thinking that a mild meningitis might be produced by experiments of this character and disappear without causing noteworthy symptoms six rabbits were killed at periods ranging from three to eight days after enucleation and cover slips from the surface of the brain were examined for pus cells and a piece of the brain was cut in each case from near the chiasm, hardened and examined, but there was no evidence of infection having found its way to the brain.

The results of these (43 in all) experiments tally precisely with what happens in human beings under similar circumstances, and they help to impress us with the fact that death from meningitis induced by enucleating an eye in the acute stage of a purulent panophthalmitis is an exceptional event. That the infection travels by one or more of several routes (i. e., by the lymph and blood passages, the sheaths of the optic nerve) is probable.

Yet it is my practice to abstain from enucleation, notwithstanding that the evidence speaks for its comparative freedom from risk. I always make two crucial incisions in panophthalmitic eyes, one on the external side of cornea about a quarter of an inch from the limbus and a little below and parallel to the equator of the eyeball, and another incision in a corresponding situation on the opposite side of the cornea. I have had a conviction that to enucleate such an eye was a risk, in spite of what

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6. La Semaine médicale, May 9. 1888.
7. Trans. Ophth. Soc., United Kingdom, 1887.
8. Trans. Med. Soc. State of New York, 1888.

Panas, Mr. Gunn and others say to the contrary, and I strongly hoped to be able to prove this by my experiments. The panophthalmitis which is experimentally produced does not differ apparently in the slightest degree from the process seen in human beings, and, while experiments of this character on rabbits (which are unusually resistant) cannot be regarded by any means as very strong evidence that the procedure is a safe one, it must be conceded that such results coincide with the views held by many ophthalmologists, that the risk, if any, is too slight to be considered.

In conclusion, let me say that, in spite of the experimental and statistical evidence in favor of the comparative harmlessness of enucleating a panophthalmitic eye, I am of the opinion that incisions in the eyeball constitute a measure which is perhaps safer, and I should perform enucleation only as H. Knapp suggests in cases in which a speedy and painless recovery would be of high importance, as, for instance, in old and enfeebled persons.

816 Park Avenue.

ABSTRACT OF DISCUSSION

Dr. L. Webster Fox, Philadelphia: Being situated in a manufacturing city I have had an extended experience in enucleation of the eyeball. From the different mechanical shops we have various panopthalmic conditions to deal with. Iron workers who lose their eyes by accidents with hot metal rarely have panophthalmitis, but we find many cases among brass and copper workers. In cases in which we cannot perform the substitute operations we enucleate if pus has formed and there is destruction of the interior coats of the eye. I have not command of the statistics and do not know how many such cases I have encountered, but I have had sufficient to know that I would never hesitate to enucleate in an acute case of panophthalmitis. I have never had a case of associated meningitis follow any of these cases. Meningitis would seem to be sure to follow some of these severe cases of inflammation of the eyeball, especially after injuries. We do get it in metastases following gonorrheal inflammation of the joints or following a chorioiditis. I have had a number of such cases, and they almost come in the same class of cases as panophthalmitis, but the resistance of the posterior part of the eye seems to prevent the backward passing of the streptococci, and the stretching of the eyeball and the weakening of the cornea allows the pressure forward and not back; therefore the pus currents are directed anteriorly instead of posteriorly. I believe that prompt enucleation, as Dr. Randolph says, is the proper thing to do in these cases, and I do not hesitate to perform that operation when pus is present to such an extent that at the end of the third day there is enormous edema of the eyelids and the anterior chamber is filled with pus, and the cornea is already clouded.

Dr. C. J. Kipp, Newark, N. J.: I have practiced for fifty years and during that time I have enucleated every eye that presented this condition. I have never seen a case in which I regretted it. I think it is the proper thing to do under all conditions to relieve the pain, especially in working people. The trouble is thus cut short and I have never yet seen the slightest harm result from enucleation.

Dr. L. H. Taylor, Wilkes-Barre, Pa.: It seems to me that it is not a question as to whether it is a dangerous procedure, but whether it is not a more dangerous procedure not to enucleate. I have performed many enucleations in panophthalmitis and have always felt that it was my duty to perform the operation in the acute stage. I have done so without hesitation and have never seen any bad results. After reading Dr. Randolph's paper I did not have time to go over all my cases, but went over some of them and find that in the earlier years of my practice I operated in a very large percentage of the cases of panophthalmitis. I have not done so many in recent years, because I believe we do not have so many cases in proportion to the number of enucleations, but I have never yet seen a bad result following an operation under such circumstances.

Dr. C. H. Williams, Boston: I want to add my experience in one case. The patient was a man about 70, and in very good health, but with panophthalmitis. I enucleated that eye. Following that there was apparently a meningitis and the man died in about two weeks. I was unable to obtain an autopsy. That is the only case that I have ever had in which a fatal result followed enucleation, but it shows, I think, that there is a certain amount of danger—not enough to prevent the operation from being done where it seems necessary, but enough to cause us to be very careful in regard to all our aseptic methods.

Dr. S. L. Ledbetter, Birmingham, Ala.: Living in a manufacturing and mining section, I have had quite a number of these cases, but still not enough to make out a case for or against the operation. In a large percentage of cases in which I have done an enucleation I have found a rupture of the sclera and there was already pus in the tissues behind the ball. Taking that view of the case, I believe there is more danger of leaving the pus than in removing the ball and allowing drainage.

Dr. E. C. Ellett, Memphis, Tenn.: Something must be done in these cases, and of course the alternative to enucleation is evisceration. Now lest we should think this an absolutely safe procedure I should like to relate my experience in one case. The patient, a negro, was shot in the eye with a slungshot, the missile being a piece of a small iron nut. When he came to me he was sure that the missile when it struck him had fallen to the ground, and beyond a dressing of the eye nothing was done primarily. The patient developed a panophthalmitis. An evisceration was done and this body removed from the interior of the eyeball. There was no penetration of the sclera, the wound of entrance being through the cornea and wholly within the cornea. The patient developed a general septic infection and died. I did not think he had a meningitis. A culture from the fluids in the eye at the time of evisceration showed colon bacillus.

Dr. Prince, Springfield, Ill.: Ever since the publication of Dr. Wisner's article suggesting the danger of enucleation in panophthalmitis I have followed his recommendation and have invariably eviscerated. I have never had any complication from that procedure since the very earliest operations. At first I had an enormous amount of inflammation following the evisceration, but I very early learned to cauterize the inside of the stump with phenol and to fill it with iodoform. This raises in my mind two questions: One is the danger of fatality and the other is the preservation of the stump. In every case in which there is not a septic condition I introduce a gold ball for the purpose of preserving a good stump. In enucleation in some instances I believe we get almost a gangrenous process and in one case the inflammation was so severe as to produce a paralysis of the superioris muscle. I have never had a complication of the ball or lid following evisceration, and if it can be shown that we can get a better cosmetic effect I should be in favor of evisceration rather than enucleation in panophthalmitis.

Dr. S. L. Ziegler, Philadelphia: I have had many of these cases and have never hesitated to enucleate. One case, in which the result was fatal, certainly was an exception. It was a case of lime-burn following the use of a spray. The man, not receiving the effect from the spray, looked into the nozzle, and at that moment, the spray, like the gun that is not loaded, went off and the eye was filled with whitewash. This was followed by a severe inflammation. I did not see the patient until three or four days after the accident. I think that before the enucleation was decided on there were certain symptoms which indicated a very mild meningitis. The symptoms certainly appeared to be severe enough to warrant enucleation. There was in connection with this a certain amount of discharge, which may have some bearing on the ultimate result. When the eye was enucleated, and afterward, although there was more or less antiseptic dressing used, the discharge continued. In another such case I certainly would dress it as an open wound with formalin dressing, but instead of enucleating I would undertake the old-fashioned method of splitting the eyeball, allowing the inflammation to subside, and dressing it as an aseptic stump until it was in a condition for further operative procedure.

Dr. Edward Jackson, Denver: I have never seen a serious complication from an enucleation during a panophthalmitis. I have sometimes eviscerated and sometimes split the eyeball from the fear that something serious might result. I saw one case in the practice of another surgeon in which the panophthalmitis was subacute—not very severe. The eye was let alone—no operation was done—but afterward, I believe, between two and three weeks, a meningitis developed and ran a somewhat slow course to a fatal termination, although the eye had not been interfered with in any way.

Dr. Hiram Woods, Baltimore: This thing sometimes assumes importance from an economic point of view in a few cases in which men have been injured in industrial accidents, and there is something in the point of Dr. Taylor that it might be more dangerous to let them alone. In a case I saw, a man was injured in the afternoon and brought, bleeding from the nose, into the hospital late, where he was seen by the intern and cleaned up. A crowbar had gone through the left eye. The next day I found that the inner wall of the orbit was inflamed. There was no pain and the eye was wide open. The question came up whether to enucleate or withhold operation on account of the fear which Dr. Randolph has brought out in his paper, and the eye being wide open and the patient being free from pain and free drainage present I decided to let him alone. He did well for two weeks; then suddenly his temperature shot up. The intern called a consultant, and lumbar puncture was done but the man died from meningitis and a culture showed infection from the Flexner organism. The Flexner serum was tried, but without effect. Dr. Flexner wrote Dr. Wilson that it was the first traumatic case in which this organism had been found. The case resulted in a lawsuit. It occurred to me to ask myself what the result would have been if I had taken that eye out. The man was let alone because the ocular symptoms were not severe enough to make us do anything in an operative direction. He apparently contracted a meningitis from the rupture of the inner wall of the orbit.

Dr. R. L. Randolph, Baltimore: I did not want to give the impression that I was in favor of enucleating the panophthalmitic eye in all cases promptly. Such certainly was not the intention in the paper. I stated that in that variety in which there is an enormous amount of engorgement of the surrounding tissues that I always made incisions in the anterior part of the eyeball. I think it is quite evident that there is not the same diversity of opinion among American ophthalmologists as among our confrères across the Atlantic. At the same time I cannot help thinking from my reading and from the discussion this afternoon, that there is a small element of danger in removing an eye in this condition, and I still think it is the safer procedure, perhaps, to make incisions as I suggested rather than take out the eye in the active stage. The cases reported by Dr. Jackson and Dr. Woods, and I think one or two of the others, and Dr. Webster's case, in which meningitis followed, are interesting. I understand Dr. Woods to say that in his case there had been a direct entrance of the foreign body into the brain. Of course that case would be thrown out of the class of cases having an optical origin or a bearing on the question of meningitis following a panophthalmitis, because it would not be necessary to consider the eye as the source of the infection.

Mosquitoes and the Vernal Recurrence of Chorea.—In the *Woman's Medical Journal*, April, 1910, Dr. Marion Craig Potter, Rochester, N. Y., reports five cases of chorea occurring in the spring or summer, two of them recurrent cases, in which investigation seemed to indicate that mosquitoes stood in a causal relation to the occurrence of the disease. In one case the disease recurred a second and third season within two weeks after going to a summer resort where the child was severely bitten by mosquitoes. In the other cases there was a definite history of being severely bitten by mosquitoes with the development of the chorea following.

THE RADICAL TREATMENT OF LACRIMONASAL DISEASE BY RAPID DILATATION AND ALLIED MEASURES *

S. LEWIS ZIEGLER, A.M., M.D.
Attending Surgeon, Wills Eye Hospital; Ophthalmic Surgeon, St. Joseph's Hospital
PHILADELPHIA

Free drainage of the mucous-membrane-lined cavities and canals of the body is a fundamental essential in preserving their physiologic functions and preventing their infection. The radical relief of tear-duct disease presupposes, therefore, the successful accomplishment and maintenance of a patulous lumen in the lacrimonasal canal. The most important measures utilized for this purpose consist of dilatation, incision, introduction of styles, irrigation, electrolysis and cauterization. Extirpation of the lacrimal sac occupies a special field of its own and will not be discussed at this time.

ANATOMIC CONSIDERATIONS

For convenience we may roughly divide the tear-drainage apparatus into three parts, the first portion comprising the lacrimal puncta and canaliculi, the second the lacrimal sac, and the third the *ductus ad nasum*. The bony canal is lined with periosteum covered with cavernous tissue, over which is superimposed a layer of mucous membrane paved with columnar ciliated epithelium. This lining is often thrown up into transverse folds or rugæ which may be annular in arrangement and sometimes possess a valve-like action. The muscle of Horner at the upper end and the valve of Hasner at the lower end complete all the tissue elements essential to our problem.

The length of the bony canal varies from 20 to 29 mm. and its diameter has been variously estimated at from 2 to 7 mm., the average being 4 mm. Power[1] in 1885 carefully measured 551 bony canals and found that the average diameter was 3.77 in whites, 4.70 in negroes and 4.63 in Mongolians, the general average of all races being 4.22 mm. Theobald[2] in 1877 stated that an examination of 70 bony canals revealed an average diameter of 4.11 mm., while tests of muco-periosteal lined canals in the cadaver showed a caliber of from 4.47 to 5.25 mm. It is evident, therefore, that moist cadavers permitted larger probes to be passed than could be passed through the distorted bony canals of dried skulls. To go a step farther, we may naturally deduce what I have found to be a fact, that the lacrimonasal canal *in vivo* is more distensible than it is in skulls because the bones and tissues are more flexible.

PHYSIOLOGIC DESIDERATA

The normal function of the tear-duct is to draw off from the lacus lacrimalis the excess of tears collected there and to pass them freely downward into the nose. By winking and slight muscular contraction we encourage a suction or siphonic action which carries off this lacrimal fluid through capillary attraction. It should be our aim, therefore, to secure a patulous tear-duct and at the same time to preserve, so far as possible, this physiologic function of capillarity. The ideal method should accomplish this by a sudden wide dilatation of the duct without incision of the punctum or of the canaliculus.

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* Read in the *Section on Ophthalmology* of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Power, Henry: Lectures on Diseases of the Lacrimal Apparatus, Lancet, London, 1886, ii, p. 908.

[2] Tr. Med. and Chir. Faculty of Maryland, 1877, p. 154.

PATHOLOGIC FACTORS

The pathogenic influence of intranasal lesions in the etiology of lacrimal disease is generaly accepted. It is estimated that at least 90 per cent. of these cases have a nasal origin. Secretions that are chemically irritating and laden with infectious bacteria are poured out from the accessory sinuses onto the floor of the nose and carried by reversed capillarity up into the lacrimonasal duct. The inflammation resulting from this irritation may be superficial, causing ulceration, stricture or catarrhal thickening of the mucosa. On the other hand, the infection may penetrate the deeper structures, resulting in periostitis, caries or even in the formation of abscess. We must always bear in mind, therefore, the possibility of two active factors in the etiology of ocular disease, first, the pus-laden nasal fluids which the tear-duct may suck up and transmit directly to the eye, and second, the perverted secretions which the obstructed tear-duct may develop within itself. I have elsewhere[3] referred to this as follows:

> If now we concede an infectious cystitis of the antrum, we can comprehend how it is possible for an unlimited stream of pathogenic micro-organisms to be poured out onto the cup-like floor of the nasal chamber, and by capillary attraction drawn up into the lacrimonasal duct, and thence to the ocular cul-de-sac. The lacrimonasal duct itself is, moreover, a most fertile nidus for this bacterial development. The presence of strictures, viscid secretions, ulceration of the lining membrane, or interstitial thickening of the same, all tend to interfere with its siphonic action in the downward drainage of the tears. The bacterial growth is greatly facilitated by the consequent stagnation. Not only are the tears prevented from passing into the nose, but microbic infection is carried upward to the eye by the regurgitation of these septic secretions.

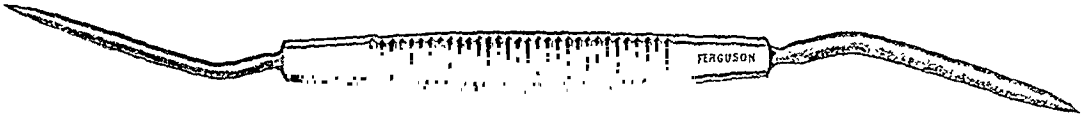

Fig. 1.—Ziegler's lacrimal dilator.

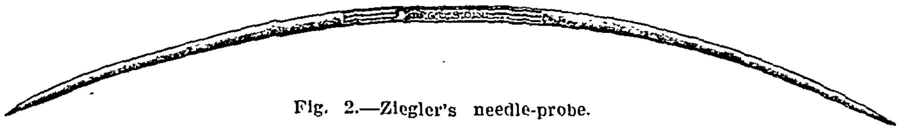

Fig. 2.—Ziegler's needle-probe.

The ocular tissues that are most vulnerable to these septic and irritating fluids are the cornea, the conjunctiva and the palpebrum. Ulcerative keratitis, especially when recurrent, phlyctenular keratitis, vascular keratitis, sloughing of the cornea and wound infection may originate in this manner. Chronic conjunctivitis, eczema of the lid, and blepharitis marginalis may arise from the same cause, while the influence of persistent lacrimal irritation in causing ectropion and entropion is well known.

The absence of epiphora or blennorrhea does not contraindicate lacrimonasal disease. On the contrary, we should always remember these two important facts, first, that we may have obstructive lacrimal disease without epiphora, and second, that we may have ocular infection without visible blennorrhea.

DILATATION OF THE DUCT

While many authorities have advocated probing of the tear-duct, Bowman probably did most to popularize this procedure. His probes, however, were very small, the largest measuring only 1.5 mm. Credit for the use of very large probes is undoubtedly due to Theobald, who in 1877 began to advocate publicly such extreme measures, and to demonstrate the excellent results which he had obtained. His probes were cylindrical in shape with a conical point, the series ranging from 0.25 mm. (No. 1) to 4 mm. (No. 16), the interval of increase being 0.25 mm. Probes of similar caliber were also adopted by Couper of London at about the same time, but were not so well accepted owing to the olivary shape of the point and the larger interval of increase (0.50 mm.).

While intern in the Wills Eye Hospital, from 1887 to 1889, I saw many patients treated with large probes in the services of Dr. Goodman and Dr. Harlan, and was greatly impressed with the superiority of this method over others in use at that time. My observations, however, convinced me that there were several disadvantages that ought to be overcome: (1) the process of dilatation was too slow; (2) oft-repeated probing created irritability of the tissues; (3) treatment was neglected by the patient because of the frequent visits required; (4) irritating nasal secretions were frequently expelled into the eye by blowing the nose; (5) the capillarity of the duct was completely destroyed by the combined Bowman's incision and the extreme dilatation secured by the use of No. 16 probes (4 mm.). The conviction was forced on me, therefore, that if a large caliber was necessary this should be accomplished at one sitting by a forcible dilatation, *ad maximum,* but without incision of the tissues, thus preserving the capillarity of the duct and avoiding the many disadvantages of the older method.

DESCRIPTION OF AUTHOR'S LACRIMAL DILATOR

I accordingly devised, in 1890, a lacrimal dilator[4] with a cylindrical body and an oval point (Fig 1), based on the old conical dilator of Levis, but essentially different in its size, shape and action. The conical dilator of Levis had three serious defects: first, it was so thin at the point that a false passage might easily be made; second, the cone in entering the bony canal became a sort of wedge that passed through the sac easily but soon became blocked; and, third, the thin point of the instrument did not properly stretch the inferior portion of the canal as it emerged into the nose. I therefore changed the body of the dilator to a cylinder, and made the point more ovoid or bellied, with a sudden widening of the caliber just above the apex. This allows it to dilate so rapidly that the point does not catch in the mucous lining of the canal, and the body of the dilator never becomes wedged as with the simple cone.

The instrument is made in the shape of a double bayonet, two sizes of the dilator being joined together on a single handle. The smaller end is somewhat sharp-pointed and has a diameter of 2 mm., corresponding to a No. 8 probe, the shaft being 28 mm. long. The larger end is more dull and has a diameter of 3 mm., which corresponds to a No. 12 probe, the shaft measuring 30 mm. in length. The maximum diameter (3 mm.) which I adopted, therefore, was sufficient to accomplish the end desired, although it was considerably less than the 4 mm. caliber exemplified by the No. 16 probe of Theobald. This dilator depends for its success on the rapidity of its dilatation, the avoidance of repetition in probing and the fact that it retains and improves the capillarity of the duct. The instrument is made of forged steel to avoid any danger of bending. A needle-probe (Fig. 2) was also devised for use in cases of atresia. The needle-probe has the same quick expansion just back of the point, which is much sharper than that of the dilator. The oval point in like manner avoids the danger of catching in the tissues. Either the needle-probe or the small end of the dilator may be used to dilate the punctum and canaliculus, but the large dilator should always be used to stretch the *ductus ad nasum.*

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[3] Corneal Ulceration due to Nasal Infection, Am. Med., April 9, 1904, p. 599.

[4] Wills Hosp. Rep., January, 1895, i, p. 31.

AUTHOR'S METHOD OF RAPID DILATATION

Anesthesia.—As the operation is somewhat painful anesthesia is required. The instillation of cocain and epinephrin into the cul-de-sac may prove to be sufficient. These solutions may also be injected into the duct through the small cannula of the lacrimal syringe, or, if preferred, with the hypodermic syringe. As a rule local anesthesia will suffice, but nervous patients will require general anesthesia. In private practice I frequently employ nitrous oxid, but chloroform and ether may also be used for this purpose.

First Stage.—If local anesthesia has been used the patient may be seated and his head covered with a towel. For the right eye the operator stands behind the patient, whose head should rest against the surgeon's chest. With a small piece of cotton under his left thumb the lower lid is drawn down and out until the margin is tense. Holding the dilator (or needle-probe) vertically in his right hand, the small end is inserted into the punctum with slight force in order to be sure that it is engaged. A feeble click may sometimes be heard, or a sensation of sudden yielding be felt, as the punctum stretches open.

Second Stage.—Still holding the lid tense, the dilator is rotated from the vertical to the horizontal position, and slowly but firmly passed through the canaliculus, the shaft being directed obliquely upward and inward, until the point rests solidly against the bony wall of the sac. If elastic resistance is felt at this point the bony landmark has not yet been reached, and further pressure should be made. As the dilator enters the lacrimal sac a rather pronounced click may be heard, or a yielding sensation may again be felt, as in entering the punctum.

Third Stage.—The small dilator (or needle-probe) is then withdrawn from the canaliculus and the large dilator (No. 12) is inserted, as in the first and second stages, until firm bony resistance is again felt.

Fourth Stage.—The lower lid is now released from the traction of the left thumb. The point of the dilator is held snugly against the bony wall while the shaft is again raised 90 degrees to the vertical position and half rotated on its long axis until the shoulder of the bayonet is turned backward. Still hugging the bone the point of the dilator describes a half-curve backward and downward as it slips over the bony ridge of the lacrimal crest and engages in the sac. It is then pushed with firmness and considerable force, downward and slightly forward, through the nasal duct into the nose. The bayonet shape of the shank allows this to pass without pressing against the eyebrow. The dilator is allowed to remain *in situ* for a moment (or longer if desired) and then withdrawn directly upward.

MINOR ACCIDENTS

A small rupture of the punctum may occur, but this is insignificant and usually heals promptly.

There may be some ecchymosis or even swelling of the lower lid, but this soon disappears.

The nose frequently bleeds for a few minutes owing to a slight scratch of the nasal mucosa by the point of the dilator as it emerges beneath the inferior turbinate.

Patients should be warned not to blow the nose for twenty-four hours, as a very slight rupture in the lining of the canal will permit a palpebral emphysema that might prove alarming and unsightly, although it will disappear spontaneously in a few days.

Irrigation should not be attempted for at least one week, as part of the fluid might escape through some minute laceration of the lining membrane and thus cause infiltration of the tissues.

In a few cases I have noted a crackling sound that indicated slight fracture of the bony walls of the duct, but I can only agree with Theobald in saying that nothing more serious than ecchymosis has followed.

I have often been asked as to the danger of making a false passage. I have never seen such an accident, but an ignorant, careless or unskilful operator may spoil any operation. I have encountered a few cases of caries in which the usual pressure might have caused the dilator to perforate the lacrimal bone and to enter the nose over the middle turbinate. One must always "have an eye in the point of the dilator."

POST-OPERATIVE TREATMENT

The after-treatment is usually very simple, consisting of a soothing eyewash, to which epinephrin may be added in the proportion of 1 to 16. If the eyelids are glued together for a few days following the operation an astringent application will promptly check the conjunctival discharge. If there should be any puffing of the lids ice-pads may be applied. If there is ecchymosis hot stupes are indicated. If emphysema occurs no treatment is necessary, as it will promptly and spontaneously disappear.

INDICATIONS FOR RAPID DILATATION

Rapid dilatation of the lacrimonasal duct is indicated whenever a permeable canal is desired. It is particularly effective in those cases of epiphora and obstruction arising from atresia, localized stricture and general stenosis with interstitial thickening of the mucosa. Absorption of this submucous hyperplasia will often be stimulated by the mere mechanical pressure of the instrument in the canal. The most striking success of rapid dilatation is probably shown in ulcerative lesions of the cornea, and especially those of the recurrent type. The phlyctenular variety also yields promptly to this treatment. In sloughing keratitis, however, we must supplement the dilatation of the duct by disinfecting the corneal slough with formalin (1 per cent.) and by using an antiseptic wash or spray in the nostril, either hydrogen peroxid or potassium permanganate (1 to 2,000). I do not hesitate to practice rapid dilatation in cases of wound infection (lacrimal) following operation or injury, and even after cataract extraction, thus eliminating the focal origin of the infection. In many of these cases, however, I inject formalin (0.25 per cent.) into the anterior chamber, in addition to disinfecting the margins of the wound and cleansing the nostril. This technic has undoubtedly saved many eyes that appeared to be hopelessly lost.

Rapid dilatation is also of value in cases of chronic conjunctivitis, blepharitis marginalis and eczema of the lid, in which the chemical irritation of the lacrimal fluids is the chief etiologic factor. It is likewise indicated in ectropion and entropion of mild degree arising from persistent lacrimal irritation. Contraction of the socket, with an irritating discharge and more or less palpebral disturbance, is a positive indication for this procedure. I have, for many years, performed rapid dilatation in every case of enucleation, as a routine measure, for the sole purpose of preventing any secondary disturbance that might arise from the accumulation of irritating secretions in the socket. This plan has been markedly successful in preserving a healthy socket.

I have previously discussed the treatment of trachoma[5] before this section (1897) by advocating rapid dilatation of the tear-duct to relieve corneal maceration and pannus through the free drainage of acrid lacrimal secretions. At the same time I recommended that this operation should be combined with canthoplasty or external canthotomy (cantholysis) for the purpose of relieving the friction and corneal erosion caused by the tarsal pressure of blepharophimosis. Each one of these procedures thus supplements the other.

ALLIED MEASURES

While rapid dilatation is invaluable in cases of acute dacryocystitis, mucocele, persistent blennorrhea, suppuration, abscess and fistula, certain auxiliary measures may also be necessary. Irrigation, incision, stricturotomy and the insertion of styles or medicated bougies are often indicated to meet the requirements of the symptom-complex which these cases present.

Irrigation may be practiced either before or after rapid dilatation. The injection of an astringent or antiseptic solution is always a valuable cleansing adjuvant and often a curative agent. I have devised an all-glass lacrimal syringe (Fig. 3) for this purpose, which is provided with four cannulas; a small gold cannula for introduction into the punctum; a platino-iridium hypodermic needle for local anesthesia; a Tansley cannula with lateral perforations and closed end; and the ordinary Anel or De Wecker cannula.

Schwenk secures good results by injecting liquid petrolatum into the tear-duct once or twice a week and allowing it to remain until absorbed. Following the method of treating fistulous tracts by the use of bismuth-petrolatum paste, introduced by Beck,[6] of Chicago, I have been injecting his formula modified as follows:

℞.

Formalin	1/2 part
Alypin	1 part
Antipyrin	2 parts
Paraffin	5 parts
White wax	5 parts
Bismuth subnitrate	25 parts
Petrolatum, enough to make	100 parts

Mix and make antiseptic paste.

This paste can be heated and injected into the tear-duct with the glass lacrimal syringe, in a fluid state, taking care that it shall not be forced through into the nose, and applying a small ice-bag in order to quickly harden it, *in situ*. If preferred, the compound may be used in a cold or congealed state, and forced directly into the duct by means of the cold paraffin syringe. I usually employ the latter method.

By the substitution of gelatin for petrolatum in the above compound it may be poured into moulds and hardened to form "lacrimal bougies." I have been using these gelatin bougies of formalin-bismuth and also those made with argyrol, but I have not tested them for a sufficient length of time to make a definite report on the results. I am convinced, however, that they will prove valuable. I have observed that the slower they dissolve the greater is their efficiency.

The incision of Bowman is indicated when suppuration is already established. This should be supplemented, however, by rapid dilatation. In performing Bowman's operation I prefer to use an instrument combining my needle-probe on one end and a modification of Weber's knife on the other (Fig. 4). I have shortened this knife, widened the blade, made the edge more oval and used a straighter tip. With such a combination we can stretch the punctum and slit up the canaliculus without changing instruments, which is a great advantage when we have ignorant and unruly patients to deal with.

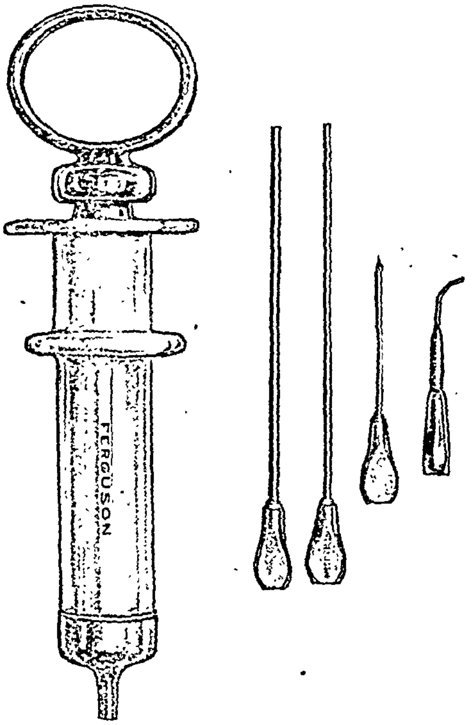

Fig. 3.—Ziegler's glass lacrimal syringe with special cannulas.

In cases of lacrimal abscess the abscess should be opened, formalin applied to its lining membrane, Bowman's incision made and rapid dilatation performed. In lacrimal fistula the same method is indicated. A lead style may also be inserted. This promotes free drainage of pus and allows the inflamed tissues to undergo normal healing, without further irritation.

It is sometimes necessary to go a step further and perform stricturotomy, after the method of Stilling, particularly in those cases in which localized bands of contraction are obstructing the canal. Instead of Stilling's knife, however, I prefer the lacrimal stricturotome[7] of Thomas (Fig. 5), which has a stronger blade than the Weber knife, is probe-pointed and has a long malleable shank. Bowman's incision is performed first, followed by rapid dilatation and lastly by stricturotomy. The Thomas knife is inserted into the duct, the probe-pointed blade is pushed down through the stricture and again drawn up, thus cutting through the stricture fore and aft; or, if necessary, four quarter-sections may be made. An application of formalin to the diseased lining of the canal is sometimes an efficient supplementary measure.

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[5] The Surgery of Trachoma, The Journal A. M. A., Jan. 15, 1898, p. 131

[6] Beck, E. G.: Fistulous Tracts, Tuberculous Sinuses and Abscess Cavities; A New Method of Treatment by Bismuth Paste, The Journal A. M. A., March 14, 1908, p. 868.

[7] Tr. Ophth. Sect. A. M. A., 1892, p. 235

If proliferation occurs in the lumen of the duct I employ a lacrimal curette to remove the granulomata. I have devised a small curette (Fig. 6), for this purpose, consisting of a long oval cup with teeth on the edge and a shank that is flexible but not malleable. This can be easily introduced and used with considerable pressure. The procedure is simple and the result will often prove most gratifying.

Lead styles have been popular ever since they were *first recommended by* Green[8] in 1868. They are indicated chiefly in cases of dacryocystitis, stricture of the duct and caries of the lacrimal bones. They may be allowed to remain in the duct until the lining has reformed, although they should be removed at stated intervals and the canal irrigated. Occasionally they will create irritability of the tissues accompanied by granulations and must then be abandoned for some other form of treatment.

As pure lead wire is very soft, and may bend on itself while being introduced, I have modified this by the addition of a small amount of tin alloy, which so strengthens the wire that it can be passed more readily and still retain the necessary flexibility. I have made a further modification of this wire by having it drawn with a small groove, which I think facilitates the drainage problem. I generally use the 2 mm. wire, which is the equivalent of a No. 8 probe. Lead styles have the advantage that they are cut from the solid wire and are preferable, therefore, to any form of gold or silver cannulas, which soon become filled with septic and foul-smelling secretions. They should be made perfectly smooth in order to avoid the deposit of accretions on any roughened area.

To facilitate the insertion of the lead style I have devised a pair of forceps with grooved jaws (Fig. 7) which grasp the style and hold it absolutely rigid. After the style has been introduced into the duct it can be released with the greatest ease by simply pushing the slide catch. If the style should subsequently slip down into the duct, or the tissues should grow over it, there may be considerable difficulty in locating and removing it. By using one of the small curettes, preferably with teeth, it can be gently probed for and easily removed by slipping the curette under the bent arm of the style and drawing it upward.

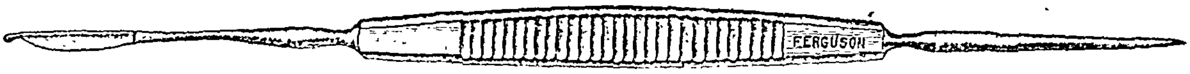

Fig. 4.—Modified Weber's knife with Ziegler's needle-probe.

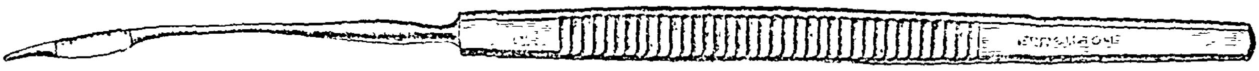
Fig. 5.—Thomas' lacrimal stricturotome.

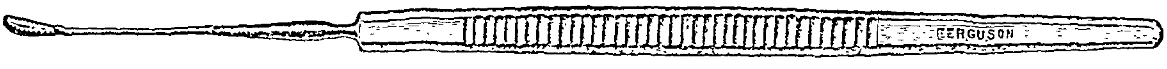

Fig. 6.—Ziegler's lacrimal and chalazion curette.

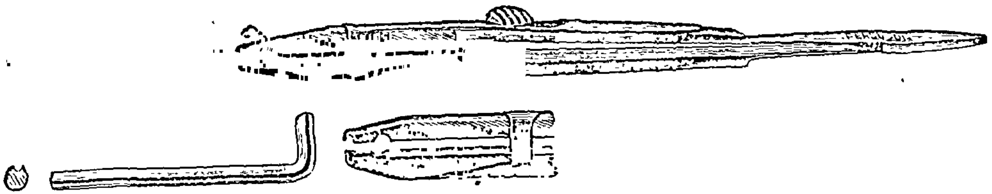
Fig. 7.—Ziegler's lead style introducer with grooved lead style.

AUXILIARY TREATMENT OF THE NOSE

We should never lose sight of the nasal etiology of tear-duct disease, and should apply our treatment accordingly. The rhinologist should remove all obstructive lesions, by reducing the hypertrophied tissues and instituting measures to restore ventilation of the upper air chambers and free drainage of the sinuses. As the anterior portion of the inferior turbinate sometimes presses on the valve of Hasner, and thus obstructs the lacrimal drainage, the fleshy fold of the turbinate should be *excised, if necessary. Temporary disinfection* of the nostril is especially indicated in all cases in which direct ocular infection is suspected.

IN CONCLUSION

Rapid dilatation of the lacrimonasal duct is by no means a panacea, but if used with judgment and discretion will undoubtedly prove a most valuable addition to our treatment of tear-duct disease. Its value lies in the rapidity of the dilatation, the avoidance of repetition in probing, and the retention of the capillarity of the duct. In some cases, however, the capillarity must be sacrificed, and in a very few cases it will be necessary to repeat the dilatation. In cases of periostitis or caries a second dilatation may be necessary, after the lining of the duct has healed. Stretching is likewise repeated in cases in which a prolonged course of nasal treatment has been instituted and completed. These cases of repetition probably constitute 1 per cent. of all cases treated. I abandoned the use of lacrimal probes nearly twenty years ago and have since relied almost exclusively on rapid dilatation of the tear-duct in order to secure the permanent patulous lumen which the radical treatment of lacrimonasal disease demands.

1625 Walnut Street.

ABSTRACT OF DISCUSSION

DR. H. MOULTON, Fort Smith, Ark.: Rapid dilatation is not a new procedure; see Juler's text-book, 1884, etc. The bivalve dilator of Galezowski is well-known. But Dr. Ziegler's method I believe is absolutely unique; first, in the pointed cylindrical shape of the dilator, second, in the fact that it is to be passed through the uncut punctum and canaliculus. The shape of the probe or dilator is ideal for its purpose. Is there ever complete cicatricial closing of the punctum after Dr. Ziegler's operation? It is often observed, I believe, that a slight abrasion of the lumen of the punctum by the point of a syringe or the moderate stretching by the pointed Weber's dilator will produce its obliteration. To dilate the punctum to a diameter of 3 mm. may have a different effect: it may so paralyze, as it were, the sphincter that it cannot shut up and grow together until the epithelium has reformed. On the contrary, when it is necessary, a clean properly made cut of the canaliculus is not harmful. I have never seen epiphora remain after such a cut when the diseased condition of the passages below has been removed. Hence, I do not hesitate to make this cut when it facilitates the treatment. How long does the effect of a dilatation last? Dr. Ziegler states that a repetition is seldom necessary; but how long a time is covered by his observation of a series of cases? His endorsement of this method is certainly sufficient to warrant any of us in trying it in suitable cases. Its painfulness, if nothing else, will probably limit its employment somewhat in private practice. I can endorse what Dr. Ziegler says of the value of the treatment of the lacrimal passages in trachoma, and of lead styles. In 1908, at Chicago, I presented a paper to this Section on the subject of lead styles. I continue to use them and the results are excellent. I do not find it necessary to have the styles grooved as does Dr. Ziegler. The drainage with the round wire is perfect; hence what is the use of a groove which might be irritating to the tissues which will certainly collapse into it. I find the fuse wire of electricians the best material of which to make these styles.

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[8] Tr. Am. Ophth. Soc., 1868, p. 31.

DR. J. L. THOMPSON, Indianapolis: I have operated on the ducts for forty years. I at first opened the upper canaliculus instead of the lower and then resorted to styles, not like the recent and larger ones we have. I would curve them so that they hung out over the lids. We were using these styles when Theobald began using the large probes. I used them large enough, as I said at Edinburgh once, for a horse, and they would close up. I have had my poorest successes in the treatment of the lacrimal duct unless I obliterated or extirpated the sac. There was only one author who had worse success, and that is B. Kocher of London, who wrote a book on the eye some years ago and who gives one to understand that after all these trials there will be relapses in a large number of cases. In one case I put in very large lead styles and in spite of everything the duct would close. Those of you who have not practiced a long time will find that you will meet with your poorest successes in the treatment of lacrimal duct troubles of almost anything you have to deal with.

DR. DONOVAN: At the meeting of the Academy of Ophthalmology in Denver six years ago I described an operation I am still using. I opened the upper duct and cut instead of dilating. My experience in dilating with the probe has been unsatisfactory. For that reason I have used the cutting method and have had no bad results from the use of the knife and a clean incision. I start with a Theobald probe, about 6 in size, and skip two or three at a time and reach 13 or 14. No. 12 I have not found quite as satisfactory as Dr. Ziegler has. I have usually had trouble a few days later, but if I used a 13 or 14 I could then afterward use a 12 at intervals of several days covering a few weeks of time. Another method I spoke of in connection with this last year was the use of an ointment of biniodid 1 to 5,000, made by rubbing mercury and potassium iodid with hydrated wool-fat and petrolatum, and injecting it in the sac and duct. It has helped a great deal in my treatment of these cases.

DR. CHARLES H. WILLIAMS, Boston: It seems to me in a great many of the more severe forms of lacrimal sac trouble we get better results by the removal of the sac rather than by probing. Has Dr. Ziegler had trouble, from the very sharp-pointed probes described in the paper, in getting a false passage in passing such a probe?

MR. J. HERBERT PARSONS, London: I have strong opposition to probes, as expressed in papers in England, and believe that the best treatment is extirpation of the sac. I have seen the practice of various surgeons, some of whom persist in using probes, others using the method of extirpating the sac, and have had opportunity to compare the two series of cases. The results, I believe, would convince most people that extirpation of the sac is very greatly the superior method. Of course I cannot say anything about the peculiar method of Dr. Ziegler, whose probe is specially devised, and it may have special advantages which the ordinary probes do not possess; but the pain and discomfort from the probing, and the repetition of the operation which is almost invariably necessary seem to be a grave objection as compared with the slight discomfort experienced after a satisfactory extirpation of the sac.

DR. JOHN E. WEEKS, New York: I have had some years of experience in treating lacrimal stenosis and my experience with dilatation of the canal has been so unsatisfactory that I have given up largely systematic probing. Those who have had a large experience know that the dosage must be repeated frequently, and sometimes it is continued for a long period of time, as Mr. Parsons has said. I employ extirpation of the sac in all cases of chronic dacryocystitis in which the patient will submit to it. But there are a number of cases in which the patients will not submit to such an operative procedure, and I have found that I obtain satisfactory results by the use of styles, as has been mentioned. The use of lead, silver or iron styles is objectionable on account of the deposits and the corrosion in the case of silver and iron. I find that gold styles are the best. A style 1.5 mm. in diameter, which does not fill the entire canal may be inserted. The precaution to be employed is to make the style sufficiently long to have a button or hook on the upper extremity so that the style will not be lost in the canal. I have treated a number of cases with these gold styles and the results have been very satisfactory. The patient may have to wear the style a year, but three months may be enough. Then it can be removed and the canal will remain patent. The cannula should not be grooved, because the canal soon fills and the grooved have no advantage over the smooth styles. They permit the formation of a ridge of tissue which it is difficult to obliterate and which does not heal smoothly. The style should be round or oval and perfectly smooth.

DR. HIRAM WOODS, Baltimore: After Dr. Ziegler wrote his former article on the subject of phlyctenular conjunctivitis, keratitis, chronic forms of conjunctivitis and blepharitis as possibly due to reinfection of the lacrimal sac from the nasal passages, emphasizing the view that epiphora is not a diagnostic mark of such lacrimal infection, I began to look into that alleged fact with reference to some of the inexplicable chronic inflammations, and that led to my first use of the smaller one of the probes he has shown here—the opener. I was surprised to find, in the first place, how easy it was to introduce that through the punctum and canaliculus, making way for the use of a 2, 3 or 4 Theobald probe, and how frequently such patients recovered without any splitting of the canaliculus at all, but by simply making the first opening with the Ziegler probe and following it with small probes and the irrigation of the sac. That is one class of cases in which I find the Ziegler instrument extremely useful. The dilatation of the punctum preserves the siphon-like action, while splitting destroys it, and I am not sure but that a good deal of the epiphora that follows splitting is the result of this. There are many patients with dacryocystitis who would not recover without extirpation of the sac. But the repeated probings that Dr. Weeks and Mr. Parsons speak of are barbarous and the repeated traumatism is damaging. The use of the Ziegler large dilator in these cases will be found useful. One dilatation gives a good opening into the duct and I have apparently cured many patients. I cannot tell how long they will remain cured, but one has been cured for a year, and several that have been subjected to the excision operation by the use of this dilator and subsequent irrigation with a 0.25 per cent. formalin solution. I have found that in cases of blepharitis and conjunctivitis and dacryocystitis the results are very good from the line of procedure that Dr. Ziegler has mapped out.

DR. S. L. ZIEGLER, Philadelphia: Complete atrophy does not occur following the stretching of the soft tissues. The tissues are so rapidly stretched that, as in any other rapid dilatation, as of the uterus, there is no contraction. I have seen a slight nick in the canaliculus itself, which soon heals and still leaves open the caliber of the punctum. As to the length of time the cures remain, I have seen recently a case in which dilatation was done eight years ago and one in which dilatation was done fifteen years ago when the child was 3 months old, with a severe dacryocystitis, practically, I presume, congenital. In the latter case dilatation was probably done more easily on account of the very soft condition of the tissues. I used the large end of the dilator as I have in every case. We see many cases of enucleation in which there is a chronic discharge from the socket. I have been able to relieve the postoperative condition by stretching the duct. Apparently there has been enough regurgitation from the nose to create this condition in the socket. That brought me many years ago to stretching in all cases of enucleation for the purpose of preventing this condition, and I certainly have had cleaner sockets in my practice since that time than previously. The bismuth paste of Beck which is being used by all surgeons in sinus work and in taking *x*-ray photographs has proved to be very satisfactory, although, as stated in the paper, I have not used it long enough to be absolutely satisfied. I have been using a cold paraffin syringe for forcing it into the duct. It is possible also to use it by dissolving it, as Beck does, and using it in the fluid condition. The illustration shows the instrument as a trifle sharper than it actually is. One end is rather sharp and I use it as a needle-probe and follow it by the large end. The needle probe is quite sharp, as all needle-probes should be for passing from the punctum to the sac. I have not seen false passage. It is possible, but I do not see how it is probable with the large dilator, as there is no room in the duct for a false passage unless we force it through the bony passage, or there is necrosis of the bone and then we should have an eye in the end of the dilator.

I explicitly stated in the beginning of the paper that I was not raising the question of extirpation, but wished to avoid it. In the cases reported extirpation was out of the question. I have recently seen a case in which, according to the patient's statement, the sac had been removed three times, and in which I had to dilate. I succeeded in getting a passage, with relief to the dacryocystitis. I cannot pass judgment on the former surgical work, as I do not know what was done, beyond the patient's statement.

THE THERAPY OF WORK*

ROBERT S. CARROLL, M.D.

ASHEVILLE, N. C.

A distinguishing characteristic of the developed human mind is its vision of unity, that power of seeing more or less clearly the whole through the part; and to our profession is peculiarly granted the large opportunity of studying man as a whole. The incompleteness and one-sidedness of much which has been called medically scientific is to be replaced by that broader grasp the whole man's needs, which has ever been the province of great physicians. This paper is written to add whatever emphasis it may to the now accepted law that man is mentally, morally and physically so attuned that when disordered, his perfect restoration demands intelligent readjustment of each element.

CLASSES OF INVALIDS

An injury may be primarily mechanical, chemical or psychic. If the original damage deranges the mechanical workings or integrity of the body, we speak of the condition as surgical, and these most obvious of all injuries have been the objects of increasing skill through the centuries of medicine, until to-day anatomic knowledge and surgical technic allow us to invade every precinct of the body. The wonderful development of this branch has, unfortunately, had its attendant evils, and but few years have elapsed since surgeons who called themselves able and honest were removing practically normal organs, and subjecting patients to exploratory incisions for the "mental effect." It is good to state that that phase of the surgeon's work has now reverted to the tyro and charlatan.

The secrets of metabolism and secretion reveal themselves all too slowly, and the modern physician, even with his years of careful, special training and his immense therapeutic armamentarium, must still feel the stigma of empiricism as he faces many of the baffling disease processes of internal medicine. Yet to many of us our patients have appeared either mechanically out of order or suffering from damaging chemical perversions, while we have ignored the very core of the sufferers' being, the psyche, that principle of life connected with, dominating, and making real the body. For years the neurologist has been pleading for a hearing in behalf of the suffering thousands on whom the surgeon has operated and reoperated, the internist toniced, depleted, stimulated and narcotized, pleading for an intelligent recognition of the fact that a certain percentage of invalids are nervously, that is, psychically sick.

THE NEUROPATH

History tells of no age which did not produce its quota of neurotic sufferers, most of them victims of perverted ideas, and few of the nervous may be found, who do not possess some moral perversion or weakness. A young wife loses her husband. The emotional shock from which she suffers is too frequently interpreted through her physical sensations. From the strong, useful woman, she rapidly becomes self-centered, her body responds to her mental suffering in the form of various perversions of sensation, and with the assistance of the physician, who has a powder for every pain, the man who has failed to apply his psychology, she starts her round of treatment, passes through the hands of the family physician, the oculist, abdominal surgeon, the osteopath, and finally finds her cure in the negations of Eddyism—and medicine is rightfully discredited.

A daughter of affluence, reared with every false protection, condemned to a life of enervating ease, and hounded by the apprehensions of a doting mother, with her reiterated suggestions of care, slips on the waxed floor of her palatial prison and injures her knee. Yes, it "looks tuberculous," and is put into a cast, later she is taken to the orthopedic specialist, is *x*-rayed, nothing is found. Months pass, and in spite of massage, Swedish movements and special nursing, she remains a cripple unable to walk. Five years later, a humble chiropractic, with his preliminary training as streetcar conductor, and a year's course at his special school of learning, lifts the head of a rib from some hypothetical, compressed nerve-plexus, and the patient walks, she dances, and the family shouts praises, but not of our profession.

She has been married six years. The only little one was taken, and as time passes, hopes for the fruition of mother love weaken. Her husband is not as thoughtful as formerly, and when he comes in late is sometimes unkind. Gradually the heaviness of her heart becomes a load on her stomach, and the doctor, who forgets this little woman's mentality, calls it indigestion. Of course, it is pepsin and the whole long list of digestants and tonics, and then the specialist uses test meals and performs lavage, and the stomach-washings and prison fare help for a while. Then the patient cannot sleep and the mental depression suggests rest cure. She returns home in good color and good flesh and everybody says she is well. But within a year she is worse than before. A great opportunity has been lost during those weeks of rest, because her mental needs have been neglected. Fortunately, financial reverses come. She must do her own work. Care of self is out of the question and a dead sister's children are brought to add their needs to her burden—needs which call out that strength so long unused, inherent and yet unrecognized by the physician who saw in the human body only a machine of mechanical construction and a laboratory of chemical reactions. These cases but inadequately illustrate the diversity of the neuropath. All of us come in contact with examples equally pertinent if we will but see.

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* Read before the Tri-State Medical Society, Richmond, Va., February, 1910.

The neuropath may be of the hereditary type. If so, his case is usually difficult. The acquired form may result from exhaustion, intoxication, or have its birth in its owner's brain. Theoretically, the exhausted class is large; exhaustion is an extremely popular, one might say, praiseworthy disorder; and the overworked neurasthenic receives much gratifying sympathy. In fact, the case of pure exhaustion is rare, but when existing, demands the full rest-cure. The rôle of frank intoxicants, alcoholics, mineral poisons and the narcotic group, in producing nervous damage, is common knowledge. The influence of the autochthonous poisons, while long disregarded, is becoming much more generally understood, and those definite symptoms following hypothyroidism and hyperthyroidism, altered intestinal flora and defective urea elimination, now receive intelligent attention. Not enough thought is given, however, by most of us to the rôle played by the excessive ingestion of highly organized foods by those who live lives of muscular inactivity. Disproportionate calory ingestion to calory consumption is the too often undiscovered cause of nervous breakdown. But the mind's own concepts and morbid moods are sources of the large part of nerve suffering, and I must again emphasize that law of unity which impels mind and body to respond to the constructive power or damaging depression of our emotional selves.

It is a dreary list we recount, as we tell over those injurious influences which are so specific in the reduction of nerve integrity: profitless introspection, morbid self-consciousness, ultrasentitiveness, self-depreciation, cynicism, pessimism, doubt, and that influence most baneful of all, fear in its many forms: dread, apprehension, embarrassment, terror, horror, fear of sickness, fear of injury, fear of the elements, fear of scandal; and those more prolonged states including enemity, grief, sorrow for loss, rebellion of death, envy, jealousy and hatred. Are these *not* the toxins of the soul? And what has surgery and medicine to offer as antidotes? Perchance, the physician may with his belief in his diagnosis and treatment inspire the sufferer with his own confidence in the scalpel and his potions, but the unending list of failures has long proclaimed the need of a true psychotherapy. The call is universal for men practised in all the arts of medicine, and in addition students of the human mind—men who will investigate every somatic deficiency, and with equal honesty, intelligence and precision, seek out and find the psychic need. The very length of the list of false psychotherapeutic cults but emphasizes the need for a true, rational psychotherapy. Mesmerism, healing clairvoyants, and voodoo doctors, faith-healers, homeopathy with its half-truths, osteopathy and its child, the chiropractic; the barefoot cure, goat-lymph, the great cult of Eddyism and its more orthodox associate, Emmanuelism, the miracle-working prayer-cure, charms, amulets and incantations, all assert in a chorus most emphatic the fact that beliefs, though false, may displace morbid ideas and effect cures. This truth must come home to us with a reiteration that may not be denied till a rational psychotherapy becomes as definite a branch of scientific medicine as is obstetrics or surgery. What this science in its fullness is to be is yet unrevealed. Workers are multiplying and in the absence of perfected methods, each is striving with his light to approximate the ideal.

PSYCHOTHERAPY

A number of years devoted largely to the development of a workable, practical psychotherapy, have convinced me of the preponderating value of work as a present help, as well as a lasting benefit, in the treatment of the nervous, and this even in the face of the oft-reiterated claim of these patients that they are suffering from overwork. The great value of Dr. Mitchell's rest-cure is unquestioned. It will not be displaced as a form of treatment in numbers of cases. Often, however, is it unwisely used, and too frequently proves inadequate, though helpful even in cases of exhaustion. With its wise supervision of diet and the oxidation incident to ample massage, it fills the immediate need in many toxic cases, while during the weeks of isolation, physician and nurse have the rarest opportunity to employ persuasion and to substitute wholesome, rational thought life for murky and morbid moods. Unquestionably, it fills certain needs, but that great law of our being, that for which our bodies were formed and our minds endowed, directed action, is not fulfilled.

The Law of Work.—Work truly is life, and any treatment which ignores every means which will make possible such life in greater abundance, cannot be comprehensive. Stanley Hall has well said, "The human body is made for action and it has other muscles than those that wag the tongue or move the pen. Many starved longings and unrealized desires are but misinterpreted calls to work." Lotze's conclusion in comparing the human body with other animals, is that "man stands at the head of the scale of creatures when estimated by capacity for work. Some animals are swifter, some are stronger, some are longer-lived, but none have such combined advantage in capacity for work. The human body is made for action."

The Therapy of Work.—In prescribing work as a therapeutic measure, a proper form should be specified. Physical employment well within the strength of the patient, productive in nature, so that its effects may be permanent, and employing sufficient mental activity to distract attention from the purely physical, is the ideal. But even drudgery has its place. A large part of the world's work is drudgery, and to the pampered neuropath there is a wholesome discipline in working for work's sake. There comes a development of will hitherto unknown in the accomplishment of common foot tons of labor.

It is unnecessary to state the physical benefits of manual labor. No man is living his best who does not daily put into activity that large bulk of his physical body, his muscular system, and into such activity as will call for a virile expenditure of energy. A large majority of neuropathic patients have worked for years along mental lines, and even though there may have been some physical expenditure it usually has been associated with emotional wear and tear. The mental relaxation and rejuvenation which follow substitution of reasonable physical employment for high-pressure mental strain, cannot be gainsaid. While there is no question that energy may be trained to flow into either physical or intellectual channels with equal efficiency, wholesome benefits to the mind come from the physical exaltation following the normal use of our muscles. But the greatest influence, the true and lasting benefit in work as a therapeutic agent, rests in the moral uplift, the great mastering of self which comes when one is taught to work right, when one knows the joy and forgets the burden of doing, when self-mastery displaces indulgence, when doubt of one's strength and ability is replaced by faith—faith which grows out of visible evidences of one's accomplishment—when morbid self-centeredness, that miserable dwarfer of the soul, gives way to an externalizing self, the forgetting of self in its relations with people and things; then the passion for material comfort will lose its devitalizing power in the face of that independence which comes with the toughening and the strengthening of will, the off-spring of productive accomplishment. Theory, sermonizing, the stimulation of music and art, the inspiration of poetry and song, have their places in the needs of many-sided man, but for developing power and character and for making man's spirit master of his body, mortal man has to work since the days of fair Eden. In fulfilling the law of work, man's spirit may not only master itself and cure itself of its quirks and quibbles, but to a surprising degree may obtain and retain a mastery over the body, which it should normally rule, a mastery superior to petty discomforts of temperature and weather and the habits of our neighbor's children and the din of traffic, a mastery superior to the miserable hyperesthesias and dysesthesias so incident to nervousness. "Is there not a crying need for that physical education which inculcates habits of obedience, mental concentration and application, and forces into the background the former man?"

REPORTS OF CASES

From a list of happy results, based on the physical, mental and moral benefits following the insistence on physical work in broken-down neurotics, I append a few short histories:

Case 1.—Mr. E., aged 50, was reared on a farm, and developed a superb physique. At 22 he went into manufacturing; at 46 he was a millionaire, and a depressed, sleepless neurasthenic, fleshy, soft, and continually anxious concerning the uncertain health of his wife, a chronic hysteric. For two years he rested, took hydrotherapy in Europe, and sought sleep in the extremes of climate until his depression seemed to anticipate an early mental disruption. An unusually intelligent attendant, isolation from his family, one-half mile leisurely walking, increased in ten days to three miles fairly brisk walking, the prescription of a wheelbarrow and spade and so many feet of sod to move each day, with some simple problems in landscape gardening, and a later explanation of the nature and mortal innocence of his wife's hysteria, resulted in a growing confidence. The walks were increased and mountain-climbing added. At the end of three months, a two weeks' tramp, "rough and tumble" over the Black Mountains, sleeping in the open and reaching 20 miles of mountain tramping a day, proved his declaration of independence. His soft 225 had become sturdy 1[illegible]0 and he returned to his family superior to worry, sleeping and eating normally, because he was living rationally—and he has lived rationally these five years. But he writes that he has never found a substitute for the wheelbarrow and spade.

Case 2.—Miss M., at [illegible]3 was a healthy, well-nourished woman with no object in life,, and a worrying solicitous mother. A fall injured her back, her left leg became helpless,.and troubles multiplied. A ventrofixation was done; a second operation removed the appendix, a third an ovary. Nine months of one year were spent in a surgical hospital. For five years the patient was unable to walk a block unassisted. Repeated vomiting and "colitis" seemed to add, at times, a grave element to the case. A course of rest treatment failed. Varied diagnoses were made. Six weeks' isolation with strict discipline, the overcoming of fear of the stomach-tube by its daily use, convincing the stomach that it could digest, and digest well, large quantities of nutritious food, revealing to the patient her constant habit of autosuggestion, paved the way for two months rapidly increasing out-of-door work, transplanting shrubs, digging, and long mountain tramps. Progress from one hobbled block to nine spry miles—her daily average six miles—sent her home eager to take a useful place in life and to use her new-found strength productively.

Case 3.—Mr. B. inherited wealth and for fifty years was a dilettante. He played at work, he played at business. Doubt was his enemy and doubt broke him down at 28, but the diversions of a trip to Europe restored his ability to play at work. At 42 doubt again divided his energies. Europe failed, but interest in a new New Hampshire farm, with a new variety of play work succeeded. At 48 his doubts and their attendant fears rendered him incapable of signing a check, selecting a tie for the day or deciding whether to take his walk or sit by the fire. Europe was again tried; the New Hampshire farm this time proved unavailing and two years of life were wasted. Physically, the patient was in excellent shape. His trouble was his mentality. He had never had to do a real thing. Isolation was advised. In addition to a rational routine, a bushel of rusty, crooked nails was given this hereditary millionaire to straighten. There was immediate and energetic rebellion. The gentle logic of persuasion was employed to convince the sufferer that as he had found his strength inadequate to decide even the pleasures of life, the demand that he develop the will by daily performing that which was undesirable, first suggested by another, later as the will strengthened, planned by himself, that some time every day should be spent in the performance of those tasks he would prefer not doing, was the ground on which his battle must be fought. The progress was rapid. He even became zealous to straighten the whole bushel unassisted, and to-day writes in praise of crooked, rusty nails as the best chalybeate for moral anemia. He now works every day certain hours with his muscles and certain hours and efficiently, with his brain.

Case 4.—Miss L., of delicate ancestry, grew into young womanhood with no training for self-support. Misfortune reduced the family income, and her efforts to utilize her excellent education for practical ends threw her into contact with a woman of strong passions, and an intense mutual attraction followed. Under the woman's influence, the girl's sexual initiation occurred. Later she was separated from her ardent friend; shame and remorse and the feeling that she was forever unworthy rapidly produced a motor hypersensitiveness of unusual severity. A morbid shyness made her almost a recluse and her faith in humanity was sadly injured. A gynecologist located the trouble in the pelvis. The uterus was curetted and suspended, a cystic ovary removed and six months in bed prescribed. The patient left the hospital under the admonition to avoid physical exertion. The damage to the psyche had not been considered. Three miserable years of hothouse living followed. The motor sensitiveness became almost intolerable. The patient was a burden to herself and her family. Physiologic rest seemed impossible. An examination which sought and found the true injury was the beginning of her recovery. Her own conscience recognized her true need, and the placing of her wrong in its proper relation to life, the helpfulness which came from ventilating this darkened chamber of her existence, with ten weeks of isolation under the care of a nurse capable of giving the sympathy which inspires strength and resolution, then a gradual transition to walks and active work in the garden, followed by combined outdoor and indoor practical work, made her for the first time in her life a producer, and for over two years she has been independent.

Case 5.—Dr. W., at 40, was a surgeon of national reputation, slight in stature, with no generous circumferences save those of his cranium, typically neurotic. The doctor had had three years of unusual European advantages and had returned to his American practice with the irritations of the phlegmatic continental operators superadded to a natural mental hypersensitiveness. He worked hard, but he worked wrong. He worked in an atmosphere of criticism. Explosions of temper were uncontrolled; they bespoke the touch of genius. Ambition and jealousy contributed their corroding touch, and he broke down. It seemed entirely physical. For the last months of his work he ceased walking entirely, using his machine for even the shortest trips, depending on the elevator, and ready to abuse all things mundane which did not respond to his command. Walking became impossible. "Colitis" supervened, physical exertion adduced great discomfort in the legs and abdomen, and diarrhea was the penalty of any extra work. He was well treated physically at home and abroad, but the last state was worse than the first. It finally occurred to his physician that a neurologist might throw some light on the case. The neurologist sent him to an institution which he entered with little hope. The patient was too weak for much work. His mind, however, was very active; he was skilful with the knife and occupied himself whittling ingenious toys for his children, deriving much pleasure in applying the simpler laws of mechanics to and artistically finishing his handiwork. As this man's breakdown had not resulted from work, but from emotional damage due to his wrong moral attitude, and as no physical lesion was discernible, it was possible to ignore the physical and let him know that it was ignored. Discussion of his bodily ills was tabooed, and he and his nurse began measuring the distances from the institution to various points of interest. At the end of two months he was making five miles of good mountain tramping a day in winter weather. Three months from his entrance he was cutting loose from the trails and going straight over some of the highest of our Appalachian Mountains. Two weeks later he resumed his practice. He now operates four and half days a week, rests one day, and works in the open with axe and pick one and a half days. No day passes that he does not do homage to his muscles, and he has displaced the jealousies and vaulting ambitions and lack of self-control with wholesome motives.

CONCLUSION

Who of us but recall cases in which our best efforts have proved unavailing, yet in which the patients have recovered in response to methods which we know were crude, unscientific and inadequate? Some form of psychotherapy had remedied a disturbance of psychic source. And what more perfect influence can there be than that which recognizes the need of the whole man, which utilizes his entire capacity, which harmonizes the warring elements of his being, and restores unity, wholeness and productiveness? Such will ever be the mission of work when divorced from damaging moods.

THE DIAGNOSIS OF RETROPERITONEAL ENLARGEMENTS*

W. H. ALLPORT, M.D.
CHICAGO

I. THE METHOD OF DIAGNOSIS

This is an old subject, and yet an important thought brings perennial refreshment to its discussion, and attaches to it a more than passing value; for on the correct solution of many of these examples in abdominal algebra is based the wisdom of the choice of a transperitoneal or retroperitoneal operation.

Although I intend to deal with objective enlargement as the point of departure for my discussion, so important is everything which concerns the definite location and identity of disease on one or the other surface of the peritoneum, that I may take the liberty to digress at certain points a little, to consider cases in which the absence rather than the presence of enlargement adds confusion to the situation.

The busy surgeon has to answer such questions out of hand, without consideration of statistics or text-book classification, and reads the riddle—if at all—by the light of experience, and by the extemporaneous application of a cultivated logical faculty. We may be justified in thinking, therefore, that even when made the text of more ambitious discourses, this subject, when treated clinically, will thus yield the more lively interest, and will carry farther into the mind of the practitioner accustomed to every-day occurrences.

This paper, then, is an informal one, based altogether on a few salient personal experiences, with scant reference to authors or authorities. We can find enough of the clinically unusual in the simple recital of observations along a great surgical frontier to satisfy the most ardent seekers after diagnostic excitement.

In my student days, it was a favorite observation of an old friend and teacher—who still holds toward many of us the same beloved dual relation—that no two cases of typhoid are alike, and that no one case is ever just like the type the physician carries in his mind's eye. Just so do we find most retroperitoneal conditions; as soon as we have our ideas well formulated from a melancholy contemplation of past failures, up crops some wretched novelty in a false face to upset our notions of the fundamentals. If we start, then, with too many formulas, we shall not only cloud that clearer vision which knows a few truths and knows them well, but we can hardly reach any very comprehensive basis of diagnosis. The occasional exception may prove a rule, but too many either of rules or exceptions hamper decisive movement.

And first let us consider briefly the personal element underlying all diagnosis. A retrospect of my own many and constantly recurring diagnostic errors shows that they have been made largely either through ignoring or incorrectly valuing easily accessible diagnostic data, or else through accepting the crude opinions of others on vital points. In history-taking the statement of an absolutely ignorant patient, who is seeking relief and not damages, and who has a mind altogether virgin of opinions, is of more value than that of an educated crank with a fixed idea. In history-taking one should seek facts, and best of all objective facts; one should shun opinions—even those of colleagues. Many of the errors here frankly enumerated were due to disregard of these oft-repeated medical platitudes.

Secondly; when it comes to guessing—and who does not indulge in surgical guessing?—we should even then in the same way reserve to ourselves the right to guess independently. But we should guess as does the insurance actuary—scientifically, with the tables spread out before us. If the doctrine of probabilities, fortified in this manner, is a reasonable basis for the most conservative business in the world, why should the surgeon ignore it? To look for cancers in the old and sarcomas in the young, for acute abscess and the results of neglected trauma during the years of productive activity, and for chronic abscess and tuberculosis at all times—this in brief is the working theory of probabilities as applied to surgical diagnosis; the exceptions are few, and whoever accepts the doctrine to its fullest will be right the greatest number of times.

In this connection, let us note that many men have too much exceptional but undisciplined knowledge, and ignore safe guides for the conduct of everyday surgical life. Book knowledge brings as close familiarity with the unusual as with the usual, but leads to a disregard of averages. The commonplace man who makes a judicious canvass of symptoms and settles down behind the doctrine of averages is apt to be right the greatest number of times. The usual is more likely to occur than the unusual, and the skilled diagnostician takes this into account.

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* Read before the Tennessee State Medical Association, Memphis, April 13, 1910.

Case 1.—*In a recent case brought into the hospital for diagnosis,* this doctrine strongly influenced the diagnosis, although the case was held to be inoperable and surgical confirmation was thought unnecessary. A rosy and well-nourished child of 4, without history of previous diseases, presented an abdominal tumor of about six months' standing. Although the patient was said to have had previous high fever, during one week's observation, there was no fever or leucocytosis, and a von Pirquet test was negative. The skiagraph was negative. There was no vomiting, constipation, or diarrhea, no pain, and no urinary finding. The bladder, however, was thick and large, and there was continual urinary incontinence. There was no axillary, cervical or inguinal glandular enlargement. The abdomen was swollen and careful percussion showed it to contain a small quantity of fluid. Behind the descending and transverse colon was a growth, extending from the extreme left flank to the outer margin of the right rectus; there was some doubt whether the smaller portion to the right of the median line was actually joined to the larger portion to the left. The left border of the growth was rounded and smooth, and could be traced well under the costal arch above, and to an ill-defined point behind the sigmoid below. There was no fluctuation, and no pain or tenderness. Within the abdomen could be felt a few less-defined lumps which were not freely movable and seemed to be more closely associated with the posterior layer of the peritoneum than with anything actually within the cavity.

A diagnosis of tabes mesenterica had been made prior to admission.

The probabilities and known facts in this case pointed toward renal sarcoma, with only a remote possibility of tabes, and it was a little difficult to see why the latter diagnosis could have been previously entertained. While tabes sometimes exists in well-nourished children, without fever, without bowel symptoms, without adenopathy in other lymphatic regions, and possibly also as a primary large rounded tumor which might even so completely encroach on the kidney region as to simulate a renal tumor, it would have to be conceded that a wide margin of probability lay against such a large and characteristically located infantile growth proving to be anything other than renal sarcoma. Nor with the secondary enlargements present would it have been possible to entertain the diagnosis of urinary cyst. The safest diagnosis, therefore, was renal sarcoma.

Case 2.—A baby, 6 weeks old, weighing but five pounds, and nourished by bottle, vomited continually. My simple mind grasped only the connection between bottle and vomiting, and I hunted up a wet-nurse. The mother, a hysterical and unreasonable woman, became alarmed and made me bring in, coincidently with the wet-nurse, a consultant. My consultant happened to be a widely read man, but somewhat mentally astigmatic; and his recent reading happening to have been along the line of congenital pyloric stenosis, he immediately saw good reason for suspecting it in this infant, and strongly hinted at an operation. This was too much for the mother; she sought shelter in the bosom of homeopathy, taking the precaution, however, to take her wet-nurse with her, and the baby recovered forthwith.

Case 3.—A supposed hour-glass contraction of the stomach was introduced into a clinic, held for the benefit of a distinguished English abdominal surgeon, and, after preliminary demonstration by an internist, was operated on only to disclose a stomach free from deformity or other conditions demanding operative interference.

Both Patients 2 and 3 presented a number of symptoms of stenosis, but also of other and simpler conditions, and a proper recognition of the probabilities should have placed them in some other category—at least temporarily.

Thirdly, it is a fair question to ask, in certain puzzling situations, What may a man be reasonably supposed to know and not to know? Even the luminous mind of Herbert Spencer reached its limitations; sadly enough, it is true, but at the end of his years he frankly admitted that he could see only a small segment of life, and even that as through a glass, darkly. Why should not we admit the same limitations? Such confession of the boundaries of knowledge is not only scientific, but appeals to the practical common sense of most patients.

Case 4.—A large middle-aged traveling man presented himself with a slowly growing tumor, not very hard, but also not fluctuating, the size of a grape-fruit, at the level of the navel and lateral to a line dropped from the right nipple. The patient had lost flesh, had slight subacute temperatures; was pale and cachectic, but not jaundiced; had no colic, vomiting, or constipation, and but slight local tenderness. The findings in urine and feces were negative. The tumor followed moderately the movements of the diaphragm, was closely associated with but under the colon, and could not be disassociated from the liver. The diagnosis was any man's, for there could be no positive answers to either of those two crucial anatomic and pathologic questions which must be answered in every case if there is to be any true diagnosis: What organ is involved? What process involves it? Incision down to the tumor at its most superficial point disclosed a retroperitoneal mass, composed of layers of fibrin and inflammatory deposit surrounding a core of old semisolid blood, which had descended from the pleura under the ligamentum arcuatum externum, and had burrowed its way along the fascial planes in front of the kidney up into the mesocolon. Closer questioning and examination during the patient's convalescence brought out a fractured rib—the result of a forgotten fall across a chair-back several months previously. It should be noted especially that the tumor could neither be associated with nor disassociated from any of the important organs lying in its vicinity. The key to the situation was ignored in the history-making.

And yet we have no right to put into any of these common ports of refuge of the indolent man until the real and available sources of knowledge are exhausted. We may rely as much as we please on common sense, and surgical instinct, and the doctrine of probabilities—these when legitimately used are merely methods of applying experience to concrete problems, and involve no occult powers peculiar to people of genius. We may in a pinch even, as in the instances just cited, shelter ourselves behind the limitations of knowledge. But none of these processes improperly employed can excuse the failure systematically to seek out, classify, and weigh all available diagnostic data.

At the bottom then, of diagnosis lies educated method, whether consciously or instinctively directed.[1]

II. THE PROBLEMS OF THE REGION

After this rough sketch of the scanty framework on which all diagnosis must be erected, let us consider a few of the special problems and diagnostic resources of this great borderland region.

There is no more promising approach to a comprehensive grasp of retroperitoneal diagnosis than one which takes normal position as a *fixed point,* but which traces, with the aid of an imaginative faculty bred of experience, the variations from that standard usually and primarily produced by perverted function. Thus we find ourselves recurring constantly and inevitably to our first years' studies in anatomy and physiology. And more so in these regions than in the extremities, for there we have a standard ready at hand in the companion limb to jog our flagging memories; whilst here, observation, memory and imagination—joint attributes of great intellects—must supply the deficiency.

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[1] In a recent address, President Hadley of Yale made the far-reaching observation that education, by the study of abstract and often intrinsically useless subjects, teaches the methods by which the fully developed man solves the practical problems which come to him in his years of productive activity.

Many of us can recollect an instance of the operation of this great imaginative faculty, which sees the link joining the normal with the abnormal, in a memorable controversy of half a generation ago between a teacher of anatomy, and the greatest of all American surgical pathologists. The point in dispute was the relation of the structures passing to the liver in front of the *foramen* of Winslow between the two layers of the hepaticoduodenal ligament. The surgical contention was that the portal vein encroached on and menaced the approach to the common bile-duct. The anatomist scouted the idea and produced text-books and finally a pocket-edition cadaver with which to overwhelm anatomic doubts. The great pathologist—the discoverer of the ball-valve production of intermittent jaundice by stone in the common bile-duct[2]—listened silently to the demonstration, then responded: "Very good, very good, but I speak as a surgeon and a pathologist, and my relations are not yours." Those who operate on the diseased and obstructed common duct have had occasion to confirm the literal correctness of his observation.

The old arbitrary division of the abdomen by lines into geometrical regions is still the best, and no modern classification can surpass it in its clinical value. To each region anatomy assigns its own peculiar organ, and the clinician is justified in insisting that any organ suspected of having escaped from its own territory must have its identity proved beyond doubt. We can never forget that the enlargement found in the left hypochondrium should—anatomically—be spleen or kidney; an epigastric tumor should be stomach or pancreas, unless it may be a cyst of the lesser omentum; a hypogastric growth should be vesical or genital; inguinal tumors should be hernial or ovarian, cecal or sigmoidal; those in the umbilical region should be aneurismal, intestinal, mesenteric or omental; and lumbar enlargements should be renal, colonic or appendiceal. Nor should we forget that each organ is entitled physiologically to its own normal range of motion. On this anatomic basis we are justified in opening our investigation.

But right away we make two discoveries:

First: These regions are of concern mostly to the anatomist—it is the dividing lines between them, and the encroachments on them which interest the surgical pathologist.

Second: There are certain abdominal foci which represent centers of normal activity and which occur quite without relation to any arbitrary lines or divisions. These foci are apt to serve also as storm-centers from which radiate morbid processes. Such centers are points where the different physiologic systems come into contact, and here pathology also centers and the diagnostic trouble begins.

Consider, for example, the classical McBurney's point: within a circle two inches in diameter we may find normally the inflamed appendix, the cecum, and the calculous ureter; but we may also find the abnormally high ovary, the low gall-bladder, not to mention the cold abscess, the dislocated kidney, and any wandering neoplasm which claims squatter rights.

We draw another circle of the same diameter and center it at the foramen of Winslow, midway on the oblique line from the navel to the costal arch. Here are normally, gall-bladder, common duct, pylorus, pancreas, duodenum—each capable, with its train of morbid phenomena, of rapidly deranging the functions of every other organ in the vicinity.

Within the first region the displaced ovary is dragged up and plasters itself to the inflamed appendix; the ureteral stone impounded at the pelvic brim draws cecum or appendix into its troubles; the low and obstructed gall-bladder apes the dislocated kidney or the distended appendix, and the inflamed omentum covers all. It is even on record that this region has been invaded by a pyloric cancer[3] developing in a badly prolapsed stomach. In the second region, the swollen membranes around the foramen of Winslow may mask the perforated gall-bladder, the obstructed common duct, the pyloric or pancreatic cancer, or the thickened gastric or duodenal ulcer. Every surgeon of ordinary experience has faced problems which have to find solution along these lines.

Here are several examples from these regions where the important question was, peritoneal or retroperitoneal?

CASE 5.—*A fat woman, not jaundiced, presented herself with a roundish, movable tumor in the right lumbar region, lateral to and not covered by the colon. There was local pain, but otherwise no physiologic derangement. There was good basis for suspecting either the kidney or gall-bladder—which was it? Inflation of the colon by Ziemssen's method failed to separate the tumor from the loin, or to show that it belonged in the hypochondriac region. Manipulation, however, pushed it most readily forward and upward—it would not slip into the normal kidney position, and was, therefore, recognized as gall-bladder. Incision made cautiously directly down to the tumor proved the diagnosis to be correct.*

CASE 6.—*A young man entered the hospital with a round, finger-sized and shaped, painful swelling under the colon in the right lumbar region, well above McBurney's point. Several mild previous attacks, and like this one, without fever. No vomiting, no constipation. Leucocytes, 20,000; polymorphs, 84 per cent. Loin colic, but only moderately rigid rectus. Urine contained some pus. Was it the ureter or the appendix?*

Diagnosis was reasonably clear, for the tumor was too far to the right to be the ureter—which is rarely displaced. Incision directly over the tumor disclosed a very high appendix lying lateral to the colon.

CASE 7.—*A fat saloon-keeper came, after a previous operation for appendicitis, complaining that his pain was just the same. He was so fat that it was not possible to make out a tumor, but there was great pain on deep pressure in the loin. His urine was loaded with pus, and he had a constant evening temperature of 101. The enlarged kidney pelvis was incised and drained, but the temperature continuing for two weeks, it was found necessary to remove the kidney. After separating all of the organ except the upper portion, I finally tore that loose from some dense adhesions, and with it tore out the lower wall of a great subphrenic abscess, the existence of which had never been suspected. The patient had a good left kidney and recovered perfectly in spite of repeated blunders in surgical diagnosis.*

Now strangely enough, the spleen also frequently becomes the center of unjust suspicions. One would suppose theoretically that an organ so definitely located and so securely placed would hardly mix matters very seriously for any of its neighbors. It should be traceable, if enlarged or prolapsed, back into its pocket under the deeply concave roof of the diaphragm, and if it pushes downward it should also project forward and lie superficial to and cephalad to the colon, which falls with it. And yet my note-book recalls two cases in which although we held a strong belief that the spleen could not be excluded, the culprit proved to be another organ.

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[2] Stones in the Common Duct and Their Surgical Treatment, Am. Jour. Med. Sc., 1896.

[3] Osler: Lectures on Abdominal Tumors, New York Med. Jour., Feb. 3, 1894, p. 132.

CASE 8.—A Montenegrin who spoke no English entered the hospital for treatment. His previous history was negative of all facts which could throw light on his present condition. In addition, the temperature, weight, blood and urinary findings were negative. In the left side, projecting from beneath the ribs, was a roundish solid tumor in which one could feel a notch not unlike that of the spleen. The tumor moved with respiration into the abdomen, but could best be felt in the flank. When the colon was inflated, the tumor was still found to lie more in the flank than toward the median line, but the colon was displaced downward. I erred in giving this latter point too great weight—the tumor was a large hypernephroma, pushing the spleen up and the colon down. The respiratory mobility was transmitted to the tumor through the spleen. The key to the diagnosis was the great lateral growth into the loin under the peritoneum, instead of toward the navel within that membrane.

In a second case, the spleen was called on to prove an alibi in another direction.

CASE 9.—A parchment-colored and emaciated native from the American Nile district around Cairo wandered up to Chicago with a tumor. The growth was larger than an Osage orange, and projected from beneath the left costal arch into the epigastric, umbilic, and left lumbar regions, but in a plane not usually invaded by the spleen. It could hardly be called movable, and its lower border was none too well defined. The tumor and the patient's history and residence suggested a malarial spleen; but although the red blood cells were reduced and irregular, there were no parasites, and persistent vomiting pointed strongly to the stomach. An analysis of the stomach contents after a test breakfast showed no blood, but hydrochloric was replaced by lactic acid. On this analysis a diagnosis of probable cancer of the stomach was based, but I held that the spleen could not be excluded. An incision showed a cancer of the distal extremity of the pancreas with secondary involvement of the greater curvature of the stomach. The spleen was normal.

Instances of situations in which organs encroach on and must be differentiated from one another might thus be multiplied until the limits of this paper were reached. But enough has been said to develop certain added diagnostic truths with which to supplement the division of the abdomen into anatomic regions, physiologic centers, and pathologic boundary lines. The following simple generalizations will be found to harmonize with scientific views of the influence which normal anatomy has on the development of abdominal disease:

1. The zones surrounding the different physiologic foci just enumerated are well defined under normal conditions, but overlapping often occurs when the range of motion or of growth of the organs lying within them becomes pathologic. This occurrence alone is strong presumptive evidence of disease.

2. In studying those cases in which change of position is a factor, two important aids to diagnosis are noted:

A. Displaced organs—"unknown quantities"—when manipulated, still show their easiest range of motion toward, rather than away from, their normal centers.

B. In cases in which an organ enlarges abnormally its direction of growth is still within the zone and cleavage plane normal to that organ, and rarely into or across new fascial planes. This last generalization is subject to apparent exceptions in cases in which large growths push the planes ahead of them, in which malignant growths involve all planes, and in which an intraperitoneal growth takes on a pedicle. It finds its most brilliant application in the diagnosis of those chronic fluid accumulations which occur so frequently in the retroperitoneal spaces.

III. COLD ABSCESS

There is another important factor which I have separated somewhat from our study of organic diagnosis, because it has to do pathologically and clinically with a process rather than with an organ. I refer to that greatest and most confusing of all elements which cloud abdominal diagnosis—the cold abscess.

If one were looking for a universal point of departure for a system of differential diagnosis, one need go no farther than the study of the many-sided aspects of chronic suppurations. This phase of the subject cannot be studied too much, nor can we see and remember too many of these cases, to keep us alive sufficiently to the fact that we have them always with us, and always under fresh disguise.

Let us analyze briefly some of the essential features of these pseudo-growths and pseudo-organs—for such they invariably appear to the clinician as they occur in the retroperitoneal space—in the hope that out of their apparent and invariable irregularity we may develop some sort of system.

1. They involve spaces and fasciæ, rather than organs, and when organs are involved in consequence of the anatomic arrangement of fasciæ, these are merely imbedded in the abscess and are not a part of it.

2. Through the insinuating properties of the liquids of which these accumulations are composed, they follow the fascial planes more definitely than do either tumors or organs, and are apt to assume elongated and unusual shapes.

3. But on account of their hard rind of fibrin and inflammatory tissue, as well as of the tense fascia which surrounds them, they rarely fluctuate and easily simulate roughly the adjacent solid organs or tumors.

4. But this similarity is apparent rather than real. The growth is atypical and the simulation if closely pressed does not conform to type in vital particulars. Organic diagnosis, whether of the normal or of the diseased organ, finds itself—as the French say—in an *impasse*, and this very fact should lead us to suspect the donkey in the lion's skin. In this phase of diagnosis, we should be ever on the alert to entertain suspicion, even if organic exclusion cannot be positively established. If "probability is the rule of life," we cannot escape here the doctrine of probabilities, for there is no patient too young or too old to be immune to infection, and chronic abscess is more common than any other pathological process.

5. More than elsewhere, do we find these cases clarified by a study of the history. In one of the cases (Case 3) already cited, the discovery of the half-forgotten traumatism to the chest would have thrown a flood of light on the atypical quiet tumor in the right lumbar region.

CASE 10.—In another case I was fortunate enough, through a study of the history, to identify an enlargement low down in the left lumbar region, as a pulmonary abscess which had burrowed from the lung beneath the diaphragm and lumbar fascia. This patient was supposed to be dying of consumption. Temperature was hectic; expectoration was profuse, but without tubercle bacilli. The history showed that her trouble began with pneumonia, and physical examination showed the left lower lobe well broken down, with the rest of the lung in fairly healthy condition. The tumor did not fluctuate, but the inference was plain that the cause lay eight inches away in the lung.

Less obvious are those insidious cases in which the abscess drifts down from some forgotten trauma to the spine, or from traumatic hemorrhage so near the kidney or colon that quiet infection takes place after the lapse of weeks. Such cases are especially obscure when the elevated temperature is only subacute and the white count but 9,000 to 11,000.

CASE 11.—In one case the abscess pointed at the base of Scarpa's triangle and was taken for an iliofemoral aneurism on account of transmitted pulsation.

CASE 12.—In another, there was a history of a bad fall with subsequent inability to work on account of great pain throughout the pelvic and lumbar regions. Subsequently a painful hard, irreducible tumor appeared in the groin, which many surgeons identified—for no particular or obvious reason—as a "traumatic hernia." Incision proved it to be a psoas abscess, and a skiagraph demonstrated a carious spot in the lumbar spine.

In these two cases the error in diagnosis was hardly excusable, for a reasonable inquiry into the history, and a more careful investigation into the local findings would easily have shown that the conditions suspected in each case were clearly impossible. In the first case the most casual application of our ordinary knowledge of the stigmata of aneurism would have effectually blocked that diagnosis—the pulsation was not intrinsic but transmitted; there was no bruit. The same method should have saved Case 12, in its travels from surgeon to surgeon, from an impossible diagnosis—an incarcerated and irreducible hernia could not have existed for twenty-four hours without the most fulminant abdominal symptoms; this patient had a soft painless abdomen and normal bowel movements.

In another case, however, no such charge could lie, for several surgeons worked long and intelligently for a diagnosis before the operation disclosed the true nature of the disease. This case is cited in detail in order to direct attention also to a practical application of a new and very important aid to diagnosis by exclusion:

CASE 13.—E. M., a baker, aged 47, entered the Alexian Brothers' Hospital to be treated for chronic neuralgia and sciatica. He made his own diagnosis and was assigned to the medical service. He complained also of chronic asthma, due to the inhalation of flour in his trade. The lung findings were negative; and the evening temperature was persistently normal, with a pulse of 60. The urine was normal; the blood was slightly deficient in red cells, and the white cells were 6,300. The sciatica was left-sided, and there was also pain along the anterior crural nerve. Treatment was antirheumatic. After several days an irregular tumor was discovered in the left abdomen which was described by the history-writer as kidney-shaped, but which was, on more careful examination, found to consist of two somewhat distinct masses—a small one beneath the costal arch joined to a large one near the sigmoid. Inflation of the colon showed the tumor or tumors to lie behind that structure, and covered by it, except where the size of the growth caused it to project into the flank. The growth was hard, non-fluctuant, and fairly movable, but only the upper mass moved with the diaphragm. By the medical officer, the tumors were thought to be primary and secondary sarcoma of the kidney, and the patient was referred to the genitourinary service.

Repeated examinations of the urine drawn by ureteral catheters from the separate kidneys gave only normal findings. A lead probe was, therefore, introduced into the pelvis of the left kidney through the ureter, by Dr. H. L. Kretschmer under the direction of, and by the method described by Dr. L. E. Schmidt.[4]

The patient was then skiagraphed with probe *in situ*. The plates showed no stone and no tumor shadow, but the ureter was shown to be displaced toward the spine and the probe passed well beyond the tumor region, thus excluding both kidney and spleen.

On these findings, the patient was transferred to the general surgical service with a probable diagnosis of cancer of the bowel developing into the mesentery.[5] In this diagnosis I could hardly concur, for there were no bowel symptoms such as should have been caused by so large a growth—distention, obstruction, mucous or bloody stools. Inasmuch as there was no spinal pain or deformity, I still suspected a new growth near but not connected with the lower pole of the kidney and not involving the ureter. The age of the patient made sarcoma more possible than probable, and a suspicion of fluctuation recorded prior to operation made it not impossible that we were dealing with a cyst from the lower pole of the kidney.

It was at this point that the doctrine of averages should have found recognition, for what more natural than to remember that a swelling, painless and irregular, possibly fluctuating, and incapable of certain association with any organ, should be a cold abscess? On the other hand, the absence of fever, the painless, normal spine, the advancing age, the failure to elicit a history of trauma, all pointed away from that conclusion.

There was nothing in this case to give positive support to the diagnosis of abscess except the doctrine of averages, and the great surgical truth that malignant disease is usually of organs, while chronic abscess involves fascial planes and spaces, with all the irregularity of form, development, and location which fascial anatomy implies. And yet the tumor proved to be an ordinary cold abscess, and subsequent skiagraphy showed it to have originated from a quiet carious process in the body of the second lumbar vertebra.

IV. PAIN AND HYSTERIA

It would be a grave omission if I failed to mention—even in this superficial enumeration of the more puzzling clinical aspects of retroperitoneal diagnosis—the parts played by pain and its great twin motive, hysteria. I do not here refer to patients in whom there is obvious tumor or obvious variation from physiologic standards—such patients can be safely studied along objective lines. But there are many cases through which, to the surgeon, pain moves like a minor and elusive discord, and he can neither silence it nor seize it because the key in which it is pitched is altogether subjective. Yet to the patient, pain is no secondary overtone, for in the absence of its vibrations many a tumor has reached a hopeless size even before diagnosis has been sought, and many another pathologic deposit thus solely announces its presence subjectively long before mere volume—its "fundamental"—makes it known to the surgeon. Such cases present psychologic phases which call out the real genius of the diagnostician, and no child either in surgery or worldly wisdom can solve them. For oftentimes—in patients suspected of hysteria—they demand an analysis of occult motive, and a weighing of the genuineness of pain, which would do credit to a prosecuting attorney.

Now, whatever may be said about "the curative effects of operations *per se*" in hysterical patients—and we should not be slow to acknowledge that for the hysterical patient, who can be positively identified as such, there is nothing so much deserved and so calming to the troubled soul as cold steel—the surgeon, at least, for the honor of his craft, should understand and should record beforehand on his operating book, his diagnosis and the object of his incision.

It is a grave question whether pain which the surgeon believes to be genuine, but which exists alone and as the solitary symptom, can ever justify him in cutting either into the peritoneum or into the retroperitoneal space. My own experiences in thus venturing for exploration into these great dark labyrinths, with no other guide than the expressions of pain, have been sad indeed.

CASE 14.—An old friend, a very stout florid woman at the menopause, came to me complaining of pain in the left iliac region, and of continued hemorrhage from the bowel. I found no hemorrhoids and no cause for the bleeding. She took purgatives constantly, complaining of obstinate constipation; she had a good appetite and was losing no flesh. She took a very gloomy view of her case and wished an operation. I refused, and sent her to a colleague for an opinion; he thought her symptoms suspicious. On account of her size I still hesitated, but under pressure consented to use the sigmoidoscope and to remove a few tags of hemorrhoids. The sigmoidoscope showed nothing, but she presently returned and urged a laparotomy. This was performed and the sigmoid and iliac regions were thoroughly explored in spite of enormous deposits of fat. Nothing was found, and the patient died on the seventh day of ileus. Her sister had died a few months before of cancer.

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[4] Kolischer, G., and Schmidt, L. E.: New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery, Nov. 9, 1901, p. 1228.

[5] A very similar case is cited by Osler: Lectures on Abdominal Tumors, New York Med. Jour., May 5, 1894, p. 545.

Case 15.—"*Aus meiner Docentenzeit*"—not my case. A nervous young school teacher complained of pain in the right loin radiating into the penis and testicles, with frequent and painful micturition—as often as every twenty minutes; the urine was strongly acid, but otherwise negative. This patient cheerfully went through four operations—the last a nephrectomy—and died after the last through the slipping of a ligature placed on the renal artery. Absolutely no anatomic basis for the pain was found at the post-mortem.

In these two cases, literal acceptance of the patient's statements led straight to the operating-table and the dead-house—and yet, in the light of the result, we can see that there was not a single symptom, either objective or subjective, which did not pass through and receive improper and exaggerated color from a panicky patient. It is a fair question to ask whether the patient or the surgeon was most the victim of hysteria.

There is, however, a certain morbid yet legitimate delight which probably every surgeon has felt in allowing plainly hysterical patients to reach the operating-table, simply by permitting their vicious and lying symptomatology to work itself out to a logical conclusion. We may fairly ask, why not take such patients at their word, and let them suffer the consequences? But always with our eyes open.

Cases 16 and 17.—Two hysterical patients complaining of pain in the left kidney were operated on without other symptoms and without operative findings. One, a fat old person with chronic hospitalism, was operated on by the loin route, and the kidney fastened—no result; she lived, of course. In the other—long known to the operator as a hysterical offender—a median incision was made; a nephroptosis was present on both sides, but inasmuch as pain was present only on the left side, the kidneys were not touched. A retroverted uterus was treated by the Alexander-Adams method. This patient became pregnant presently, and forgot her loin pains in more genuine twinges when the round ligaments began to tighten up.

In this connection we should not fail to note the close association so frequently observed between hysteria and the various forms of visceroptosis. It is hardly safe, however, to attribute the morbid mental state to the ptosis—more probably the two derivatives lead back to common roots in malnutrition and venous stasis in all the body cavities.

In my experience, operations have no terrors for the hysterical, and there is nothing gained by trying to scare such a patient out of her pain—in fact the mere hint of an operation is often seized on as a source of renewed excitement and the victim takes positive pleasure in mounting the operating-table.

On the other hand the mere existence of unidentified pain and the willingness of the patient to undergo repeated operations are no positive evidence of hysteria. To the student who combines the study of human nature with that of surgery the following case will have a deeper significance than when studied merely as a problem in diagnosis:

Case 18.—A hardworking, good-looking Irish woman of 35 was employed in the millinery department of a large store. Her occupation justified a certain amount of hysteria, but she was possessed of unusual intelligence and poise. Her interesting and suggestive history was as follows:

About a year previously she had begun to have pains high up in the rectum, with rectal and vesical tenesmus and occasional incontinence. Her menstruation was more than usually painful and she had pains in the thighs and in one great toe, alternating with numbness, and acute cramps in the same calf. There was also a constant and oppressive deep pain in the back in the sacral region. During the year she had been operated on twice—the rectum, cervix and urethra had been thoroughly stretched, and the rectal mucosa had been trimmed clean of various supposedly offending polypi. Still the pain, etc., continued. My net finding was a retroverted and adherent uterus, with a suspicion of a large right ovary adherent high up. Abdominal palpation showed nothing. Median laparotomy was frankly exploratory. The theory was the usual one of retroversion, sacral adhesions, hard work, referred pains, with a liberal allowance of easily accounted-for hysteria. After freeing adhesions and raising the uterus, the finger sweeping over the rear pelvic wall detected, beneath the peritoneum and quite out of sight, a hard tumor the size and shape of a half plum and growing from the sacroiliac cartilage. The tumor was admirably placed to elude detection by either abdominal or rectovaginal palpation, and but for the instinctive and final exploratory sweep of the finger would probably have remained undiscovered, until the slow growth of ensuing years would have brought it within palpating distance. The tumor was a metastatic deposit from a hypernephroma. (Report of Dr. LeCount.)

Such a case gives us pause in the too free use of those diagnostic refuges—"hysteria" and "referred pain."

V. CONCLUSIONS

To sum up these very fragmentary observations, let us formulate a few conclusions, bred of that sober second thought which comes from the contemplation of personal catastrophe.

Method—educated method—lies at the bottom of all diagnosis. The genius for surgical diagnosis is rarely anything more than systematized knowledge.

The surgeon should take no man's word in abdominal diagnosis—he should do his own guessing, but do it scientifically.

He should recollect that abdominal diagnosis, like all applied knowledge, has its limitations—it is more scientific to announce that they have been reached, than to confess error later on.

"Probability is the rule of life," and the rule holds equally good between the ribs and the pelvis.

Abdominal regions are for the student of normal anatomy; boundaries concern the surgeon and the pathologist.

Displaced organs still move most readily toward their normal habitat.

The growth of the abnormally enlarging organ is still apt to occur within the zone and fascial plane normal to that organ; such growth is usually along, rather than across the normal cleavage planes; to the surgical pathologist the part of anatomy which is most profitably studied is that which concerns the distribution of fasciæ.

Neoplasms are usually closely associated with organs; the irregular and atypical enlargements which follow fascias rather than organs are apt to be either secondary deposits or chronic suppuration—more likely the latter.

In case of doubt, one should never forget that archdeceiver, the cold abscess.

Chronic suppuration is rarely recognized by the direct method—the rule is diagnosis by exclusion.

Attention is especially directed to the history sheet, the temperature chart, the blood-count and the urinalysis report.

Inflation of the colon by Ziemssen's method often enables us to assist diagnosis by crowding the tumor into one or the other space in front of or behind the posterior layer of the peritoneum. If the growth is found by this method to be retroperitoneal, the kidney should be studied again by palpation, urine analysis, the *x*-ray, and finally by metallic ureteral catheterism combined with skiagraphy.

The neglect to recognize and properly to appraise hysteria is as frequently a cause of the miscarriage of diagnosis as is the failure to identify the cold abscess.

During those impressionable years which succeed every man's graduation from college, I served in a large hospital and followed many cases from the medical to the surgical wards and often—it must be confessed—to the dead-house. It was our privilege—which even then we recognized to be a glorious one—to serve under a man who thought little of time or money and much of the honest foundations of his great art in diagnosis and pathology—Christian Fenger. He made mistakes, but under the inspiration of his method they were to our fecund minds more vitalizing than the triumphs of other men. For from his own errors, he taught himself and us, and led the way to a keener search for future truth. "Did we observe all the observable facts?" "Were the facts distorted by passage through refractory media or by incorrect methods of observation?" "Well, then, our deductions were wrong, and we must observe and reason better next time!"

607 Rush Street.

INTESTINAL OBSTRUCTION FROM ASCARIDES LUMBRICOIDES

REPORT OF A CASE

RICHARD E. VENNING, M.D.
CHARLESTOWN, W. VA.

The older authors denied the possibility of obstruction from this cause. Treves, in his work on obstruction of the intestines, expresses the opinion that "there is no trustworthy illustration of this somewhat rare form of intestinal obstruction."

Peyrot[1] does not mention a single case in his exhaustive observations on intestinal obstructions.

Rilliet and Barthez[2] think it possible, but state that strangulation caused by worms must be exceedingly rare.

D'Espine and Picot[3] contend that not a single example of intestinal strangulation exists, at least in the case of a child.

Galvagno Bordoroni in 1887 was the first to report a case of obstruction from lumbricoides, which he confirmed by the post-mortem examination. In the same year Stepp[4] speaks of a case of a 4-year-old child in which the post-mortem showed fifty ascarides, hermetically sealing the lumen of the bowel.

Taylor[5] in 1899 reported a case in which he operated and found two feet of the ileum inflamed and edematous. He opened the intestines and delivered sixty-six worms in a mass producing the obstruction. The intestine was damaged beyond repair and the child died on the third day after the operation.

Botoff[6] describes a case of obstruction of the bowels with perforation and subsequent peritonitis, in which the post-mortem disclosed 500 ascarides in the bowels.

Simon[7] in an autopsy on a child dead from obstruction of the bowels, found a mass of worms interlaced and strangling the intestines.

In a number of cases reported, the diagnosis of obstruction from worms was made and after the administration of anthelmintics and purgatives a large number of worms passed and the obstruction disappeared.

In other cases, at operation or autopsy, a few worms have been found producing an obstruction. This was due rather to the position of the worms than to the large number mechanically blocking the intestines.

A large lumbricoid has been found in the appendix vermiformis, coiled within the appendix and wrapped around the bowel, producing the constriction.

I find on record very few cases in which the obstruction has been convincingly shown to be due to the mass of lumbricoides.

That a collection of great numbers may be present without producing symptoms of obstruction is mentioned by Winocoucoff[8]. In one case 2,500 were expelled in five months from a child and in another child 12 years old 5,000 were expelled within three years.

Patient.—I saw the child, a boy aged 2½, for the first time at 10 p. m., February 28. The parents stated that he had not been well for some time and that he had worms, having passed eighty in a few days. Careful inquiry convinced me that these worms had merely worked their way out of the child's mouth and anus.

Examination.—In appearance the child was small for his age and very much emaciated. He complained of pain in the abdomen and was restless. The skin was dry and harsh. There was no nausea or vomiting. The child refused nourishment but took water freely. There was no distention of stomach or abdomen. Palpation of abdomen did not show much tenderness. The bowels seemed to be filled with masses, palpable through the thin abdominal wall, which both Dr. F. M. Phillips, who saw the case with me, and myself, thought were worms. The worms forming these masses could be so distinctly felt as to leave no doubt in our minds that they were causing the obstruction.

During the night ten worms came from the patient. We advised operation and the next day the child was brought to the hospital. By this time the stomach and abdomen were distended and on palpation painful.

Operation.—The abdomen was opened in the midline, incision three inches. The abdominal cavity contained a small amount of free bloody serum. The small intestines seemed everywhere filled with worms. Twenty-four inches of the jejunum was distended, almost to the point of rupturing. I opened the bowel and extracted the worms as rapidly as possible. So tightly were they impacted that it was necessary to remove them one at a time until the mass was somewhat untangled. After clearing this portion of the bowels the incision in the bowel was closed. About the middle of the ileum another impaction was found about 10 inches in extent; this was similarly treated. The last point of impaction was found at the cecum. Here the worms were massed in the ileum as well as the cecum and the appendix was so packed that it stood up like one's thumb. It was evident at this time that the bowel had been too largely distended to regain its tone and a resection was considered, but the child's condition did not justify this. No fecal matter was found in any part of the intestines.

Postoperative History.—The abdominal wound was rapidly closed and salt solution given subcutaneously and by rectum. The child was almost pulseless when put on the operating table and died six hours after. In this case the obstruction was clearly due to the large number of worms mechanically blocking and overdistending the bowels. There was no fecal matter anywhere in the bowels, no volvulus, constriction or anything producing the obstruction other than the large masses of worms. The average size of the worms was 9 inches, the smallest 7 inches. Two hundred and seventy-three worms were removed at the time of the operation. Ninety were passed by anus before operating and, as only the masses sufficiently large to produce obstruction were removed, I should think one hundred or more were left in the bowels.

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[1] Peyrot: Obstructions de l'intestin, Thèse d'agrégation, Section de chirurgie et accouchement, Paris, 1880.

[2] Barthez and Rilliet: Traité des maladies des enfants, Ed. 3.

[3] D'Espine and Picot: Manuel des maladies de l'enfance, Edition 4, 1885.

[4] Stepp: München. med. Wchnschr., 1887, No. 51.

[5] Taylor: Am. Jour. Obst., 1899, p. 800.

[6] Botoff: Jour. de clin. et thér., 1897, No. 10.

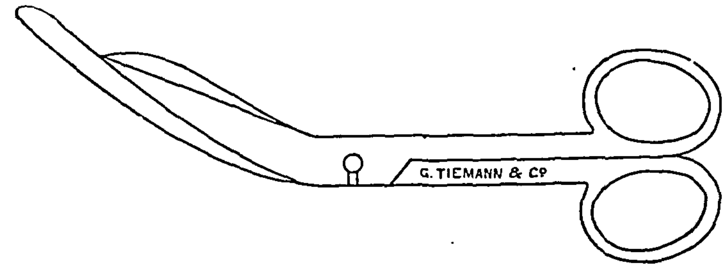
[7] Simon: Rev. médical de l'est., 1892, p. 228.

[8] Winocoucoff: Centralbl. f. Kinderh., May 1, 1907.

DISSECTING SCISSORS

B. F. JENNESS, M.D.
Passed Assistant Surgeon, U. S. Navy
BUFFALO, N. Y.

This instrument was designed to facilitate the work usually done by a grooved director and scalpel, especially that of enlarging wounds and making incisions where important structures lying beneath the field are not visible. It is particularly useful in enlarging peritoneal incisions, and in hernia work, where the slitting of fascia and aponeurosis necessitates separation from important structures beneath. The tapering steel dissector on the scissor-blade may be pushed beneath tense membranes, and if upward pressure is maintained and the point of the dissector slightly elevated, it will push away the soft tissues beneath, and the structure to be cut will slide on the lower blade of the scissors.



Dissecting scissors.

After a small incision in the peritoneum this instrument can be used to enlarge the cut, without endangering the intestines which may be distended and lying in contact with the peritoneum.

DERMATITIS FROM ARISTOL

HENRY H. AMSDEN, M.D.
CONCORD, N. H.

This case is reported because of my inability to find record of similar disturbance from this drug in the literature at my command.

A. M., aged 27, was delivered March 11, 1910, after normal labor, of a healthy child. There was a superficial laceration of the perineum, closed by silkworm-gut sutures. Aristol was used as a dusting powder, and twenty-four hours later a maculo-papular eruption appeared, affecting principally the extensor surfaces of knees and elbows, thighs and lower back, accompanied by intense itching. The eruption promptly subsided on withdrawal of the aristol; no other probable cause could be assigned for its appearance.

Whether the thymol or the iodin radicle was responsible for the symptoms is a question. It would seem that the common use of this preparation as a local application might not infrequently be followed by dermatitis in susceptible individuals

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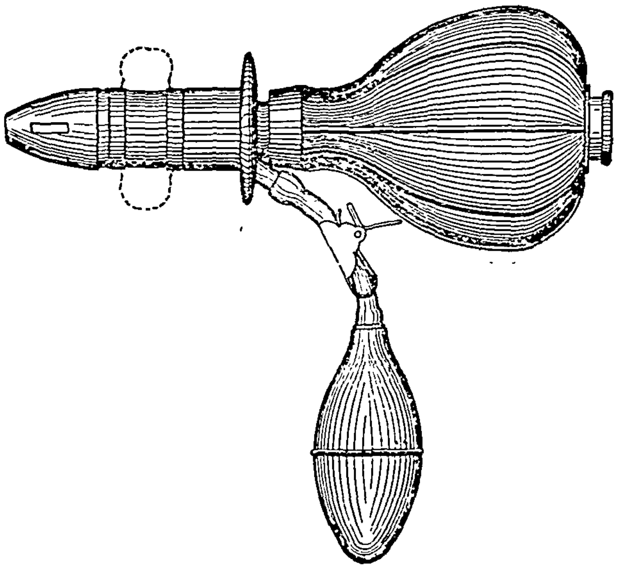
A SYRINGE FOR TREATMENT OF CERTAIN VAGINAL DISEASES

S. L. KISTLER, M.D.
LOS ANGELES, CAL.

The syringe shown in the accompanying illustration consists of a nozzle to which is attached a Politzer bag, also a small bulb. The nozzle has surrounding it an inflatable band ring or sleeve and under this band ring the exit of a canal reaching into the small bulb above referred to. The canal leading from the small bulb to the inflatable sleeve has on the small rubber tube a shut-off. The small bulb may be filled with air or other liquid and when it is desired to inflate the ring the small bulb is compressed, which causes distention of the sleeve, and when the cut-off is closed prevents deflation of the sleeve. The Politzer bag attached to the nozzle has an inlet or filling device in its proximal end. A small fountain-syringe or face-bag may be used instead of a Politzer bag, and any desired pressure obtained, according to the height at which the bag is held above the nozzle.

As is well known, germs (particularly gonococci) are prone to penetrate the epithelium and to establish themselves in the deeper layers, even in the submucous tissues, and when so situated a solution injected can have little effect unless pressure is used to produce penetration into the nidi, so that the medicament may be applied directly to the bacilli, or to the tissues in order to hasten repair and thus destroy the germs. Ballooning the vagina is the result of pressure when the instrument shown in the accompanying illustration is used, all crypts and folds being obliterated by the ballooning and the cul-de-sac distended. Consequently the solution is allowed to reach the bacilli directly, a result impossible to obtain with any other syringe with which I am acquainted. Non-staining silver salts are ideal, also colorless hydrastis, zinc and other colorless preparations are recommended for obvious reasons. This treatment is made possible by the water-tight plug or valve which closes the canal and which is the original feature of this device.



Vaginal syringe, consisting of a Politzer bag attached to a nozzle surrounded by an inflatable band ring from which a canal leads into a small bulb. The dotted line shows the vaginal closing device expanded while in use.

3146 Vermont Avenue.

A UNIQUE CASE OF LACERATION OF THE SPHINCTER ANI

A. B. COOKE, M.D.
NASHVILLE, TENN.

History.—Feb. 26, 1910, a boy, aged 7, who lived on a farm, went out to his favorite place behind the corn-crib to attend to a call of nature. While engaged in the act a pet dog, a hound of medium size, came up from the rear and mounting him, effected entrance into the anus and became "accoupled." The child's outcries quickly brought his mother on the scene. The dog had reversed his position and was in the same relation to the boy as is ordinarily seen following sexual intercourse with a bitch. The mother's excitement was naturally very great and in her frantic efforts to disentangle the two she used considerable violence, first with her hand, and finally jerking the dog loose by main strength. When the physician arrived the hemorrhage had practically ceased, but on inspection he discovered that the bowel was lacerated and advised that the boy be taken to Nashville for treatment. He was taken to St. Thomas' Hospital, where I saw him at 10 p. m. the same day.

Examination.—There was no bruising of the surrounding parts and little external evidence of injury. Traction on the anus, however, revealed that several lacerations of considerable extent were present. Under general anesthesia next morning the deepest of these was found to be near the middle line posteriorly, extending from a point two inches up the rectum, through the sphincter muscles and out on the skin surface for a distance of approximately one inch. The external sphincter was torn in two places at this site, one tear being complete, the other partial. Anteriorly there was a second laceration into, but not through, the fibers of the sphincter. In addition there were a number of minor tears in the anal margin involving the superficial tissues only.

Operation.—Fourteen interrupted catgut sutures were used in repairing the posterior laceration and four in the anterior. The others did not require suturing. The result was entirely satisfactory. Union was prompt and complete and the patient returned home in two weeks with perfect sphincter control.

Jackson Building.

DEXTROCARDIA IN PULMONARY TUBERCULOSIS

RICHARD N. DUFFY, A.B., M.D.
NEWBERN, N. C.

Moderate degrees of dislocation or displacement of the heart not associated with disease of the heart itself are not infrequently seen. Pleuritic effusions, pneumothorax, pulmonary tumors, fibrosis of the lungs, meteorism, peritoneal exudates and transudates and other causes of increased intra-abdominal pressure, all may cause displacement of the heart in various directions depending on the location of the pathologic condition. Again, one may find the heart in an abnormal position at birth in that rare condition known as situs transversus or inversus. By far the most frequent cause of noncongenital dislocations of the heart to the right side, dextrocardia, is pulmonary tuberculosis. Seldom, however, in this disease do we see a complete transposition to the right side.

In a clinical study[1] of 2,344 tuberculosis cases at the Phipps Institute in Philadelphia some degree of displacement of the heart was found in 57 instances, that is, in 2.4 per cent. of the cases. According to Pottenger,[2] however, it is exceptional not to find the heart displaced in advanced pulmonary tuberculosis. In right apical lesions of long standing, according to Brown,[3] even when the physical signs are slight, the right border of the absolute cardiac dulness is not infrequently found three quarters to one inch or more to the right. Turban[4] considers this "a typical and cardinal symptom" of tuberculosis of the right apex. The displacement of the heart in pulmonary tuberculosis may be due to fibrosis consecutive to the tuberculous involvement, to pleurisy with the formation of adhesions, extensive cavity formation, pneumothorax, or a pleuritic effusion.

Complete dislocation of the heart to the right is very uncommon. Only five instances among 2,344 cases examined are reported from the Phipps Institute.[1] The displacement may take place suddenly, owing perhaps to the giving away of slight adhesions, or to sudden changes of intrathoracic pressure. Brown[3] reports a case illustrating the former condition. Or the displacement may be more gradual. Young[5] reports a case of this kind. Brown[3] has also reported an interesting case of valvular pneumothorax from the rupture of the wall of a cavity in the lower part of the left upper lobe, in which the heart was several times gradually forced over to the right side, but always returned when a needle was introduced and the air allowed to escape.

I wish to add the report of the following case to the literature of this subject:

History.—Mr. H., a white man and a native North Carolinian, 43 years old and unmarried, was first seen by me on November 18, 1908, complaining of "consumption." There has been no previous indication of tuberculosis on either side of his family. He has five brothers and all are perfectly healthy. He himself was well up to his eighteenth year when he had a severe attack of measles. This was followed by a pneumonia and a severe diarrhea. He finally recovered from the acute attack but was never strong after this. Four years ago he became very much "run down" and developed a pain in his right chest. He consulted his family physician, was told that he had pulmonary tuberculosis and was advised to go to the North Carolina mountains. This he did and improved slightly. Later he went to Hot Springs, Ark., and here his condition became worse. He was now holding his weight fairly well, but had a harassing cough with profuse expectoration. He had coughed up blood-stained sputum on numerous occasions and had had severe night sweats. He had had an evening rise of temperature to 100-102 F. for several years. Tubercle bacilli had been repeatedly demonstrated in his sputum. About two years before the time of consultation, the patient said, while walking along the street with his hands on his chest he felt his heart beating on his right side. He asserted positively that up to this time his heart had been on the left.

Examination.—The patient was much emaciated and had an almost constant cough. His pulse was 23 to the quarter minute, regular in force and rhythm, of small volume and low tension. His eyes, ears and throat seemed normal. The respirations were rapid and shallow. The intercostal spaces were very prominent and the right clavicle was much more prominent than the left. The respiratory movements of the chest could be well seen on both sides but the movement of the left half of the chest was more marked than that of the right, especially in the upper half. The vocal fremitus was everywhere felt and was especially marked on the right side from the apex to the fourth rib in front. On percussion, the note was slightly dull at the left apex but hyperresonant over the whole of the remainder of the left front and back. On the right side the note was slightly tympanitic at the right apex and infraclavicular region. In the right axilla there was pure tympany down to the fourth interspace and this tympanitic note was also found over the right front, extending from the second to the third rib. The note over the remainder of the right front was dull down to the lower border of the liver. On auscultation, at the left apex the breath sounds were tubular, and fine moist râles were heard at the end of inspiration. Elsewhere over the left front and back the breath sounds were bronchovesicular, but there were no râles. The sounds at the right apex and infraclavicular region were a distant tubular, and over the area of pure tympany the sounds were loudly tubular. Over this whole area were heard râles of all varieties—fine and coarse moist râles, sonorous and sibilant râles. Pectoriloquy was also marked here. Over the remainder of the right lung in front the breath-sounds were a distant tubular and were accompanied by fine and coarse moist râles. The right back was markedly infiltrated throughout. On examination of the heart I was astonished to find the point of maximum impulse just beneath the right nipple. The beat was regular and forcible and there were no thrills to be made out. The area of cardiac dulness extended about 1 cm. to the right of the nipple and above to the third rib in the right mammillary line. It reached its highest point at the second interspace at the right border of the sternum. It then dropped extending across the sternum to the third interspace at the left sternal border. It then curved out about 0.5 cm. to the fourth interspace, then to the right, again reaching the midsternal line at about the fifth interspace, and descending downward and to the right it mingled with the liver dulness. The liver dulness seemed normal in its extent. On auscultation of the heart there was a soft systolic murmur at the apex. This was not transmitted and the sounds elsewhere were normal. There were no signs of circulatory disturbances. The stomach was in its normal position and the abdomen seemed normal throughout.

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[1] Second Annual Report of Phipps Institute, 1906.

[2] Pottenger: Diagnosis and Treatment of Pulmonary Tuberculosis.

[3] Brown: Am. Jour. Med. Sc., December, 1908.

[4] Turban: Diagnosis of Tuberculosis of the Lungs, 1906.

[5] Young: Boston Med. and Surg. Jour., 1907, clvii, 791.

This remarkable condition seems to me to have only one of two possible explanations. Either there has been a plastic inflammation between the two layers of the pleura and the pericardium with the formation of adhesions and a subsequent retraction of the right lung due to fibrosis; or, there has been a cavity formation in the right lung and a compensatory hypertrophy of the left lung with a crowding of the heart over into this cavity, the sudden dislocation being probably due to the rupture of delicate adhesions. From the history and the physical signs the latter explanation is probably the correct one.

This patient is still living and it has now been nearly a year and a half since I first saw him. It is therefore about three and a half years that his dextrocardia has existed. He still shows no signs of circulatory disturbance of any moment and is apparently as comfortable with his heart on his right side as he was with it on the left.

Therapeutics

DIABETES INSIPIDUS

While diabetes insipidus is perhaps never really a disease and is often a symptom, it may be a more or less permanent condition. Any suggestion as to its cause or any means of diagnosing its cause is of value in directing the treatment. While many times the condition is unimportant, not infrequently it is of serious import.

The condition called polyuria should be separated from the condition to which the above name applies. Hysterical polyuria, nervous polyuria, or the polyuria of excitement, the polyuria of high tension, of arteriosclerosis, and of chronic interstital nephritis is well understood, but generally the amount of urine passed under these conditions is represented by pints, while diabetes insipidus is represented by quarts.

Cerebral irritations and certain diseases of the cerebrum and injuries to the cerebrum have been recognized as factors in producing diabetes insipidus, but the inability of the kidneys to excrete urine of normal specific gravity, necessitating enormous amounts of water excretion to eliminate the salts which must pass out of the body, has perhaps not been recognized.

O. Minkowski (*die Therapie der Gegenwart*, 1910, li i, p. 4) defines diabetes insipidus as any disease in which there is an increased excretion of non-sugar-containing urine, without being accompanied by a lesion of the kidney. It is necessary for the practitioner to distinguish the following: 1. Whether the increased urine excretion is a primary disorder, which would lead to a reduction in the water content of the organism unless large quantities of water were taken. 2. Whether the real cause of the large volume of urine is an excessive thirst accompanied by excessive drinking. 3. Whether one or both of the above are produced by other disorders.

In general, one observes the effect of a great reduction in the water intake on the urine excretion. If the disease is a primary polydipsia, the urine excretion should be reduced by limiting the amount of water drunk. If, on the other hand, the urine volume is not reduced, the inference is that polyuria is the primary disorder. Under the latter conditions the patient will experience an enormous loss in weight, due to the removal of the water from the tissues, especially if the water intake is reduced. In most cases of diabetes insipidus, increase in the specific gravity of the blood and lowering of its freezing-point are avoided by the withdrawal of water from the tissues into the blood. Consequently, these physical properties are of little value in the differential diagnosis.

A number of authors, particularly E. Meyer, have believed in a special functional disorder on the part of the kidney which they describe as "a loss of the ability to concentrate the urine." If this is true, it would be necessary to excrete a large volume of urine in order to remove a large amount of waste from the body, and this would necessitate a large water intake. If the requisite amount of water were not taken, the tissue moisture would be removed else a retention of the solid urinary constituents would occur, resulting perhaps in uremia.

This inability of the kidneys of certain patients to excrete concentrated solutions, is particularly true of solutions of sodium chlorid, and to a lesser extent true of solutions of urea. If such patients receive from 10 to 20 gms. of sodium chlorid (NaCl) with the food, the concentration of the urine in salt is very little increased (from 0.1 to 0.2 per cent.). A large amount of urine and considerable time are therefore necessary for the excretion of all the salt. Minkowski makes use of this fact in differentiating between polyuria due to inability of the kidneys to concentrate the urine, and polyuria dependent on some other factor. If, after giving from 10 to 20 gms. sodium chlorid, the urine of the next twenty-four hours contains practically all of the salt, the individual is placed on a water-poor diet. If very little of the salt is excreted without increasing the water intake, the best treatment is to put the patient on a sodium chlorid, nitrogen-poor diet. In one patient treated by the latter method, there was a reduction in the urine volume from 12 to 14 liters (quarts) to 3 to 4 liters daily.

The diagnosis of the cause of diabetes insipidus having been made, the treatment may be aimed more or less successfully to cure the condition, or to prevent the operation of the cause. A simple polyuria from overdrinking can, of course, be easily prevented. Nervous causes may be modified if there is not actually some pathologic condition in the brain. If the blood-pressure is high, the lowering of it by proper baths, massage, physical exercise, change to a warm climate, diet, or by vasodilators will prevent it. Polyuria may, however, occur with low blood-pressure causing perhaps some disturbance of the brain, as theoretically low blood-pressure should not cause diabetes insipidus. Such instances may be helped by the vasoconstrictor drugs, and especially by ergot. It is possible that this effect of ergot is due to its action in preventing cerebral irritation, cerebral congestion, and possibly the slight cerebral exudate that may occur.

It is obvious that if large amounts of urine are passed, even if the water intake is reduced, that the patient should not be deprived of drinking plenty of water, as otherwise he will extract water from his own tissues to his immediate and perhaps permanent injury. This fact having been ascertained, and the persistent low specific gravity of the urine showing that a metabolic mistake is present in the kidneys, the outcome of the condition is very uncertain. Naturally, a nitrogen-poor and a salt-free diet could not be long persisted in, but each individual patient with this condition should be so carefully studied that he does not lose weight, and then possibly, little by little, the kidney ability to excrete urine of proper specific gravity might be developed. This improvement in the kidneys at times probably occurs. In other words, the physiology of any organ may improve. Whether the administration of kidney extracts or kidney tissue would help this kind of an insufficient kidney has not been demonstrated. It probably should be tried, even though these extracts have not much modified the excretion of nitrogen or prevented uremia in nephritis.

PROTECTIVE APPENDICITIS

So much has been said, and has been said so emphatically and so vociferously, of the necessity for immediate operation in appendicitis, and the conditions found at operation are so many times so much more serious than was anticipated, that it is time to note that there is a group of cases in which operation may be deferred or entirely avoided.

It is especially a pleasure to quote the opinion of one who has been so insistent in preaching the gospel of early operative treatment as Dr. Robert T. Morris, of New York. At the International Medical Congress, at Budapest, last September, Dr. Morris presented his views on this subject. (*Medical Record,* Jan. 8, 1910). He described protective appendicitis as "an irritative lesion, occurring in the course of normal involution of the appendix, and dependent on irritation of nerve filaments which persist in the contracting hyperplastic connective tissue which has replaced other normal structures of the appendix."

This form of appendicitis he distinguishes from another irritative lesion due to serous infiltration of the tissues of the appendix, which is seen in lithemic conditions, in obstruction of the lymph and blood circulation, and in loose right kidney which is said to cause obstruction by pressure on the superior mesenteric vein; and from two forms of infective lesions, one due to intrinsic infection, and the other to extrinsic infection. Morris believes that the most common lesion of the appendix is the irritative lesion which he now proposes to call "protective appendicitis," which he formerly called fibroid degeneration of the appendix, which Senn, in 1894, called appendicitis obliterans, and Ribbert, in 1902, called normal involution of the appendix.

The pathology of this condition consists of a replacement by connective tissue of structures susceptible of acute infective processes, *i. e.,* normal involution of the appendix. Nerve filaments persist longer than most other histologic structures and are irritated by the contracting connective tissue, hence the occurrence of more or less pain. Morris believes that this pathologic process probably is actually protective against local infective processes.

The symptoms of this condition are discomfort in the appendix, of long duration and varying intensity, but not sufficiently severe to cause the patient to go to bed; flatulence; more or less constipation and symptoms of chronic intestinal indigestion.

Among important considerations in the diagnosis of this condition Morris finds hypersensitiveness on deep pressure at the location of the right group of lumbar ganglia, situated about an inch and a half to the right of the navel, and close to the lumbar vertebræ. If there is sensitiveness in this region on both sides of the abdomen, the lesion is probably pelvic rather than appendicular. Another symptom of diagnostic importance is the distention of the cecum and ascending colon with gas, which is more dependent on paralytic relaxation of the muscular coat of the intestine than on fermentation in the intestine. Some observers claim that in most of these cases the presence of an appendix firmer than normal can be determined by palpation.

The treatment depends on the conditions present in each individual patient. If the pain is not severe and the patient is of sufficiently calm temperament not to be annoyed by it, operation need not be advised, and the patient may be told that there is no necessity for the removal of the appendix on the ground of impending danger. His comfort, however, should be increased by such hygienic, dietetic, tonic, and laxative treatment as seems advisable to improve the intestinal digestion. The patient may also be told that his abdominal discomfort will probably gradually be less frequent and finally not recur. If, on the other hand, the discomfort is considerable and continuous, and renders the patient anxious and apprehensive, so that his usefulness is impaired, an operation may be advised, and can be performed with comparatively little danger, certainly with far less danger than by the removal of the healthy appendix, in doing which a point of infection is opened in the midst of an unprepared field.

Radium Ores as Remedies.—In a communication to *Nature,* Nov. 11, 1909, H. Warth suggested that since radium has been found of therapeutic value in many conditions, that pitch blend might also be thus utilized. He says: "The very minute proportion of radium in pitch blend need be no real objection. If we substitute, in the case of pitch blend, grams for milligrams and days of application for so many minutes, a disparity of one million is soon made up, and there may be some action, although perhaps different from that of pure radium salt. Moreover, we must expect a beneficial influence from minute quantities of radioactive substance if the assumption is to be finally proved that certain thermal waters owe much of their virtue to such traces. In addition to raw pitch blend, a possible utility of pure (yellow) uranium oxid might also be considered." In a later number of the same journal (December 16) Antoonovich writes from St. Petersburg and reports that the workmen in a uranium mine which he was developing in Turkestan, where the ore averages from 3.8 to 30 per cent. or more, when cautioned in regard to the poisonous nature of the minerals, claimed that the powdered mineral dusted over wounds caused a much more rapid healing. A cut on the hand, they said, which lasts for a long time in a coal mine, gets well very quickly when powdered by the uranium ore. As they worked part of the year in coal mines they could compare their experiences.

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[*For other information see second page following reading matter*]

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PHOSPHORUS POISONING IN THE MATCH INDUSTRY IN THE UNITED STATES

The recent work by the secretary of the American Association for Labor Legislation, Dr. John B. Andrews,[1] on the occurrence of phosphorus poisoning in this country is a valuable contribution to the study of this form of industrial poisoning. Contrary to a more or less widespread impression, even among physicians and dentists, Dr. Andrews shows that phosphorus necrosis of the jaw in serious form is not at all a rare occurrence among match workers. It is true that manufacturers and others claim that the disease has not occurred to any noteworthy extent in this country during the last twenty years; Andrews, however, was able within a comparatively short time, to unearth the records of more than one hundred recent cases. On account of the peculiar difficulties in the way of securing accurate information, the total number of cases and their proportion to the number of workers probably cannot be precisely determined. We learn that the fifteen factories studied (there are sixteen factories in all in this country) employ about 3,591 persons, so that it is clear enough that phosphorus poisoning in the match industry in this country at present is not an insignificant matter.

Three kinds of matches are made: the safety match which contains no phosphorus and is harmless, the igniting composition, which consists of red phosphorus, and which is harmless when pure, being painted on the box; a strike-anywhere match, the paste in the head of which contains poisonous white phosphorus; and a strike-anywhere match in which the poisonous phosphorus is substituted by the non-poisonous sesquisulphid of phosphorus. The last match has been used exclusively for the last twelve years in France; in this country the strike-anywhere match made with poisonous phosphorus constitutes the principal output.

It is in the mixing, dipping, drying and packing rooms of the factories that the danger from breathing phosphorus fumes and from contact with phosphorus is always present. It is thought that minute particles of phosphorus enter cavities in the teeth and set up the progressive inflammation and necrosis of the bones of the jaws which characterize phosphorus necrosis. Dr. Andrews' study of the actual conditions in the fifteen factories investigated revealed that 65 per cent. of the employees were working under exposure to the fumes of white phosphorus and consequently to the dangers of poisoning; on account of the nature of their employment the women and children are more exposed than the men. Indeed, 95 per cent. of the women and 83 per cent. of the children under 15 years of age were so exposed. Undoubtedly lack of knowledge of the facts must be held responsible, in some measure at least, for the ignorance displayed of the dangers involved and for the neglect in some places to use even the simplest precautions as shown by the absence of means for carrying away the fumes arising visibly from the benches of the workers, by insufficient washroom facilities, lack of mouth washes, etc. In some factories the employers had done nothing to instruct the employees of the dangers to which their work exposed them. During recent years the conditions have been greatly improved by the institution of modern ventilation, improved machinery, better lavatory facilities, etc., but the disease exists and still claims its victims one by one, though not to the same extent as twenty years ago.

Attempts at removing the conditions which bring about "phossy jaw" were begun long ago by various European states, but the disease could not be wholly prevented even when the conditions were greatly improved. This experience has led to the prohibition in many countries of the use of white phosphorus in the manufacture of matches. This was done by Finland in 1872 and in Denmark two years later, since which time no case of phosphorus necrosis has occurred in these countries. More recently the leading European countries have abandoned attempts to suppress by regulation phosphorus necrosis, and now prohibit absolutely the use of white phosphorus in matches (France, 1897; Switzerland, 1898; Netherlands, 1901), and in 1905 the International Association for Labor Legislation secured a treaty providing for the prohibition of the making and selling of matches made of white phosphorus, which treaty has been signed by France, Denmark, Germany, Italy, Switzerland, the Netherlands and Great Britain. The experience of Great Britain is especially noteworthy; twelve years ago a thorough investigation of the conditions was made and stringent regulations, coupled with an efficient inspection, instituted. But "phossy jaw" was not prevented, and in 1908 this country also prohibited the use of white phosphorus.

No American state has yet adequately provided for the protection of workers in match factories, and, everything considered, it would seem clear that the use of a substance of such insidious poisonous action as white phosphorus should no longer be permitted so long as harmless substitutes are available and commercially practicable.

The remedy is to prohibit absolutely the use of white phosphorus in the manufacture of matches, as well as the importation and selling of matches thus made.

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[1] Bull. Bureau of Labor, January, 1910, No. 86, p. 31.

PRESIDENT-ELECT JOHN B. MURPHY

There are probably but few men in the ranks of American medicine who are better known at home and abroad than the President-Elect of the American Medical Association, Dr. John Benjamin Murphy of Chicago. His work in surgery easily places him in the front rank of American surgeons—which means in the front rank of the surgeons of the world.

Dr. Murphy was born in Appleton, Wis., Dec. 21, 1857. He was reared on a farm, attended the secondary schools and was graduated by Appleton High School in 1876 and by Rush Medical College in 1879. After service as intern in Cook County Hospital, Dr. Murphy formed a partnership with Dr. Edward W. Lee. In 1882 he went to Europe, where he studied in the hospitals of Vienna, Berlin, Heidelberg and London, returning in 1884 to Chicago.

Dr. Murphy has been successively lecturer in surgery at Rush Medical College; professor of surgery in the College of Physicians and Surgeons, Chicago; professor of surgery in the Northwestern University Medical School; professor of surgery in Rush Medical College, and for the second time, professor of surgery in the medical department of Northwestern University, which position he still holds. While Dr. Murphy is known best to the medical profession in general as a surgeon, he is known to an increasingly large portion of the profession as an instructor of the highest rank. He is a born teacher and not only has a message to give but possesses in a marvelous degree the power to give it.

JOHN B. MURPHY, M.D.

As a surgeon Dr. Murphy is typical of the country; not content blindly to follow precedent, he has blazed new trails. And, what is of even more import, in attacking a problem he is not content to leave it half-solved, in a formative stage as a mere interesting academic possibility; when it is perfected he has a fully developed, practical method, given as a complete procedure to his contemporaries. In this particular Dr. Murphy stands unique; he has not only invented, he has perfected.

Some of the best-known of Dr. Murphy's writings are: "Cholecysto-intestinal, Gastro-intestinal, Entero-intestional Anastomosis and Approximation Without Sutures;" "Ileus;" "Resection of Arteries and Veins Injured in Continuity;" "Surgery of the Lungs;" "Operative Surgery of the Gall Tracts, with Report of Twenty Successful Cholecysto-Enterostomies by Means of the Anastomosis Button;" "Fracture of the Olecranon Treated by Subcutaneous Exarticular Wiring;" "Surgery of the Spinal Cord and Peripheral Nervous System:" "Tuberculosis of the Patella;" "Proctoclysis in the Treatment of Peritonitis."

As a progressive and aggressive member of the medical profession no less than as a leading educator and a surgeon of high rank, Dr. Murphy honors the office to which he has been elected.

THE ST. LOUIS SESSION

The St. Louis Session of the American Medical Association was an unqualified success. From the scientific point of view, and from the effect in the promotion of a closer and more harmonious organization of the profession, as well as of social interest, little more could have been desired. The registration was a little over four thousand, a number exceeded only twice—at Boston and at Chicago.

In the scientific interest and in the earnestness and fulness of the discussions on the topics presented the section meetings equaled or surpassed those of any previous session. Every section had profitable meetings and the attendance in each was good. Especially notable were the symposiums in the Section on Preventive Medicine and Public Health on hookworm, pellagra and typhoid fever, and in the Section on Pathology and Physiology on cancer—subjects which, aside from their interest to the profession, have particular interest for the public, because of the wide-spread morbidity and mortality which they cause, especially in the instances of typhoid fever and cancer. Indeed, it is interesting to note the many points at which the papers throughout the whole program of this session touched the public directly in the matter of hygiene, sanitation and prevention. It is a reflection of the wide-spread interest of the public in what is being done in medicine. In many respects the Section on Preventive Medicine was the most interesting of the Session. Cancer, with its frightful mortality and increasing prevalence, was probably the most prominent subject of the Session, being considered in one or more of its aspects in almost every section, far outshadowing tuberculosis in this respect. In some of the other sections symposiums on diabetes, the infectious diseases and eclampsia, with the discussions, served to clear the atmosphere about many mooted questions. There were many other interesting features of the scientific program, but space forbids further mention of them here.

The meetings of the House of Delegates were harmonious throughout. Each succeeding year the reference committees are doing more and more work, making it possible to investigate thoroughly all the various propositions that come before the House; and thus the House is able to accomplish much more, and to do the work in a deliberate, satisfactory manner. Of the important things done by the House of Delegates, one was the creation of a new Section on Genito-Urinary Diseases, as petitioned for by many members doing work in that line. Another was the creation of the Council on Health and Public Instruction, which is to have charge of the work formerly done by several overlapping committees, covering such matters as preventive medicine, medical legislation, economics, public instruction in medical, sanitary and hygienic questions, etc. The Council will organize complete machinery to facilitate the attainment of these objects.

Any impression that there was the slightest lack of harmony in the organization was dispelled by the work of the House of Delegates and by the spirit shown in the daily work; and any attempted disparagement of the aims and purposes of the American Medical Association was silenced by the splendid statement of them contained in the address of President Welch at the General Meeting. That the public correctly understands these aims and endorses them was evinced in the admirable address of Governor Hadley and the other gentlemen who spoke at the General Meeting.

The arrangements for the entertainment of the visitors—barring those for Wednesday afternoon, when the rain interfered—were admirably carried out. The pervasive quality of hospitality, the geniality and cheerful friendliness of the South, which are characteristic of the people of St. Louis, were in evidence. The physicians and their wives and daughters were delightfully entertained at the President's reception and at many dinners and luncheons. The school and class reunions were also occasions affording pleasure and satisfaction to those participating in them.

The arrangements at the various section meeting-places were declared by some to be a distinct advance over anything heretofore seen, and the local subcommittee in charge of these arrangements deserves the highest praise. Nothing was overlooked which would minister to the comfort and convenience of the members or which would facilitate the smooth running of the sessions. The meeting-halls were models, and telephones, stenographers, messengers and everything needed were provided. A member of the committee was always in attendance to see that nothing was lacking.

The Scientific Exhibit and the Commercial Exhibit, in the Coliseum, in harmony with the rest of the Session, were a complete success. The Scientific Exhibit in the balcony, though not so accessible, perhaps, as could be desired, was interesting and well attended. The demonstration of the hookworm, for which Smith of Atlanta was given the prize, was especially attractive. Worthy of particular note was the exceedingly interesting and valuable exhibit of the St. Louis Historical Society adjoining the Scientific Exhibit. A feature of the balcony exhibit was that of the Association Laboratory, in the exposé it made of a number of well-advertised nostrums, in furtherance of the work which the Council on Pharmacy and Chemistry is doing. It elicited much favorable comment from visitors and the graphic way of presenting matters caused surprise to many.

In the interest displayed in the purely scientific subjects, in the practical subjects, in the matter of preventive medicine as touching the public and the general welfare, and in the association as an organization having the highest aims and the most altruistic purposes, the St. Louis session was a notable milestone in the gratifying progress of the American Medical Association.

INDUSTRIAL HYGIENE

Three important national conferences, one on industrial accidents and workmen's compensation, one on industrial diseases, and one on labor legislation, were held on June 10 and 11 in Chicago; and many important bodies were represented in the discussions. It is earnestly hoped and expected—and the expectation is reasonable—that by means of these conferences and the resulting coordinated activities, great and salutary changes will be achieved in the conditions to which people working in trades are subject.

Of these conferences, that on industrial diseases was the first ever held in this country. The interest which the medical profession should take in this subject was well indicated by Mr. Frederick Hoffman, actuary of the Prudential Insurance Company, of Newark, N. J., who declares that in many trades one-third of the deaths recorded are due to one specific disease; and that, at a conservative estimate, the money loss alone in the United States in one year, due to preventable occupational disease, is nearly a billion dollars. (Another statement made at this conference was that the money loss alone in the United States in one year due to sickness cost, loss in wages, and economic loss in industry, may be conservatively placed at a billion and a quarter dollars.)

Mr. Hoffman continues: "Medical practitioners will realize some day the practical advantage of special knowledge of diseases of occupation;" and it is exceedingly gratifying to note his assurance that the truth requires only to be known to produce a remedy for intolerable or needlessly injurious conditions. "Employers of labor are now doing much to ameliorate conditions. An awakened public conscience is at last being aroused. It is the duty of those qualified to do so (such as physicians) to ascertain the truth of industrial conditions affecting the physical well-being of American wage-earners."

The need of wider interest in the health problems of modern industry was also expressed on this occasion by Dr. Henry B. Favill of Chicago: "It is pretty nearly axiomatic that the modern labor problem is a health problem." Careful investigations should be made by men trained both in physiology and economics, so that effective means may be forthcoming for the prevention of the human waste in industry. Thousands suffer and die yearly from preventable occupational diseases, as for example, in those industries which make use of poisons, such as yellow phosphorus, still employed in this country, though harmless substitutes for it have long been employed in Europe.

It would appear, from the viewpoint of the general practitioner, if from no other, that no anamnesis is complete without an exhaustive consideration of the patient's occupation (which, indeed, cannot be adequately appreciated unless the physician has more than a casual and superficial understanding of the actual working conditions); nor is any plan of therapy likely to succeed which does not take into account a healthful environment during the patient's working hours.

ADDED ENDOWMENT FOR WESTERN RESERVE

Announcement has just been made of a gift of $250,000 to Western Reserve University, by Mr. H. M. Hanna, as an addition to the endowment of the medical department. It is intended that the income from this gift shall be used largely to place the various clinical professorships on a modern university basis. This gift is very opportune, coming as it does with the news that the consolidation of the Cleveland College of Physicians and Surgeons with the Medical Department of Western Reserve University has been consummated.

AMERICAN SURGERY—AN APPRECIATION

Europeans who have made a study of commercial life in the United States maintain that the fundamental difference in methods between the American and the European is one of mental attitude. With the European the tendency is to adhere to, or at most to modify, the old; with the American, to attempt what is altogether new. The European engineer prides himself on the fact that his machinery is so well made and so carefully preserved that it will last a generation; the American engineer on the other hand does not hesitate to relegate to the scrap-heap the most elaborate piece of machinery the moment a more efficient piece is invented to take its place. That this progressive attitude is not confined to mechanics and commerce in America is evidenced by the observations recently made in the *Practitioner,* by a London surgeon, Mr. W. Arbuthnot Lane of Guy's Hospital. In contrasting the skepticism of British surgeons with the attitude of the surgeons of the United States and Canada he says: "They are in advance of us in many ways in their methods of investigation. They attack any new problem very thoroughly and do their utmost to verify every fact by personal observation and they determine whether there is any truth in it or not. Trouble or expense affords no obstacle to their thirst for knowledge. They are not satisfied to accept unreservedly any statement or observation, and least of all, any opinion, and they are only prepared to receive it when they themselves have either seen it or are satisfied as to its accuracy. They have no respect for so-called authority and part with innumerable surgical creeds which continue to control us as readily as their business men 'scrap' machinery the moment a better mechanism is devised. It is this attitude of the American surgeon that is exerting such a magnificent influence on the surgery of that country and is, in my opinion, making them the most progressive surgical body in the world." Mr. Lane of course has been in the United States and evidently speaks from observation.

THE NEW YORK COCAIN LAW

During the last session of the New York legislature a particularly vicious amendment was made to the penal law of that state relating to the sale of cocain or eucain. As the law now stands the druggist must give to every person who presents a prescription in which cocain or eucain or their salts are ingredients a certificate worded as follows:

..................191

This is to certify that the bearer obtained from me on the above date, upon the written prescription of
....M.D.
of..
...... grains of cocain or eucain.

This certificate is furnished in conformity with the Act Amending the Penal Law of New York State in relation to the sale of cocain or eucain, enacted April, 1910.

Druggist, ...
....
Registered Pharmacist.

This prescription cannot be refilled nor copy given.

What the object of such an amendment is, it is hard even to guess; what the results must be is evident. The patient is at once informed of the fact that he is taking cocain—a fact that the conscientious physician is usually careful to conceal. Such a certificate in no way prevents the prescribing of these drugs by renegade physicians to cocain habitués but it does possess enormous potentialities for harm in the making of habitués. Any law that will prevent the misuse of valuable but dangerous drugs is to be welcomed but such laws must be drawn up by those who have at least a working knowledge of the many points involved. As the New York law now stands it not only does not prevent the misuse of cocain and eucain but may easily be the means of leading to the abuse of these valuable but potent drugs.

Medical News

CONNECTICUT

State Medical Society Meeting.—The one hundred and eighteenth annual meeting of the Connecticut State Medical Society was held in New Haven, May 25 and 26. Secretary Anson Phelps Stokes, Jr., of Yale University, stated that $2,000,000 would be necessary to make a first-class school of the Yale Medical School, and asked the aid of the Connecticut physicians in raising this amount. The following officers were elected: President, Dr. Frank K. Hallock, Cromwell; vice-presidents, Drs. Edmund P. Douglass, Croton, and Edward T. Bradstreet, Meridian; secretary, Dr. Walter R. Steiner, Hartford (reelected), and treasurer, Dr. Joseph H. Townsend, New Haven (reelected).

Personal.—Dr. Charles A. Goodrich has been elected secretary and Drs. Marcus M. Johnson and Joseph E. Root have been elected members of the executive committee of the Hartford Dispensary.——Drs. Nicola Mariani and Dr. William Francis Verdi, New Haven, have been made Chevaliers of the Crown of Italy.——Dr. Arthur J. Wolff has been reappointed bacteriologist of the health board of Hartford, and Drs. Alfred M. Rowley, Robert S. Starr, John F. Rooney and David J. Molumphy have been elected medical inspectors.——Dr. William H. Carmalt, New Haven, has been elected councilor of the New Haven County Medical Society.——Dr. George H. Knight, Lakeville, has been elected a member of the Board of Directors for the Establishment of County Homes for the Treatment of Tubercular Patients, to fill the unexpired term of the late Dr. John P. C. Foster, New Haven.——Dr. Herbert E. Smith, after 25 years' service as dean of Yale Medical School, New Haven, has resigned.——Dr. Emilio G. Sera, New Britain, has returned from Europe.

IDAHO

New Member of State Board.—Dr. George H. Coulthard, Idaho Falls, has been appointed a member of the State Board of Medical Examiners.

Society Meetings.—The Idaho County Medical Association was organized at Grangeville, May 27, and the following officers were elected: President, Dr. C. S. Busey, Clearwater; vice-president, Dr. John D. Shinnick, Cottonwood, and Secretary-treasurer, Dr. Carl W. Slusser, Grangeville.——At a recent meeting of the Southern Idaho Medical Society, held in Caldwell, Dr. C. L. Dutton, Meridian, was elected president; Dr. John W. Gue, Caldwell, vice-president; and Dr. Robert L. Glase, Boise, secretary.——Twin Falls Medical Association held its annual meeting in April in Twin Falls, and elected Dr. Walter F. Pike, president; Dr. John Coburn, vice-president, and Dr. James S. Purdy, secretary-treasurer.

ILLINOIS

Hospital Dedicated.—The new St. Francis Hospital, Evanston, erected at a cost of $150,000, was dedicated by Archbishop Quigley, May 28, with impressive ceremonies.

School Named for Physician.—The new school being erected in the west part of Champaign is to be named the Howard School in honor of the venerable Dr. Hartwell C. Howard, who has practiced medicine in that city for more than sixty years.

Openings for Hospital Positions.—Civil service examinations will be held throughout Illinois, July 7, to secure assistant physicians in the insane hospital and other state institutions. It is necessary to apply to the State Civil Service Commission, Springfield, before July 1.

Physician Found Guilty.—In the case of Dr. Benjamin A. Arnold, Freeport, charged with making an attack on a young girl, on whom he had operated for appendicitis, and in which the jury rendered a verdict of guilty in April, the defendant is said to have been sentenced, May 27, to imprisonment for four years in the penitentiary. An appeal is to be taken to the supreme court.

Personal.—Dr. John A. Koch and wife, Quincy, have sailed for Germany.——Drs. Oliver Hughes, Elmer Erickson, Isaac F. Freemmel, interns at Elgin State Hospital, have passed the examination for assistant physicians.——Dr. Thomas R. Foster, assistant physician at the Elgin State Hospital, has been appointed first assistant at the Watertown State Hospital.——Dr. P. S. Weidman, Edwardsville, said to be the oldest practitioner in Madison county, was seriously injured in a fall from his chair, June 2.——Dr. Elbert J. Clark, Rockford, has succeeded the late Dr. George W. Rohr as district pension examiner.

Chicago

Emergency Work in Hands of Police.—The removal of the ambulance and hospital service from the health department to the police department was accomplished June 1, under the direction of Dr. George C. Hunt. Eleven ambulances and sixteen surgeons are connected with the service and headquarters will be in the office of the chief of police.

Golden Jubilee.—Sister Mary Raphael, superintendent of Mercy Hospital for forty-one years, celebrated the fiftieth anniversary of her taking of vows, May 30. Dr. John H. Hollister, the only surviving member of the original staff of Mercy Hospital, Dr. John B. Murphy, and President A. W. Harris of Northwestern University, were the principal speakers.

Personal.—Dr. and Mrs. Emanuel J. Senn, Dr. and Mrs. Henry B. Thomas, Dr. and Mrs. George S. Isham and Dr. S. C. Stanton have sailed for Europe.——Dr. and Mrs. Sidney McCallin were seriously injured in an automobile accident, June 9.——Drs. William L. Baum and Charles L. Mix have been appointed members of the commission to take charge of the work of preparing plans for the rebuilding of the Cook County Hospital.

Commencement Exercises.—At the annual commencement exercises of Northwestern University Medical School, May 31, a class of 150 was graduated.——On May 28, the annual commencement exercises of the College of Physicians and Surgeons, the College of Medicine of the University of Illinois, were held June 7, when the degree of doctor of medicine was conferred on a class of 131. President Edmund J. James of the University of Illinois delivered the doctorate address.

The Latest Diploma Mill.—Dr. Alexander C. Chittick, whose license to practice medicine is said to have been revoked by the State Board of Health, May 24, for unprofessional conduct in connection with the sale of diplomas from the Chicago Medical University and Crescent Medical University, and who was indicted by the grand jury, June 2, is said to have agreed to plead guilty to the use of the mails to defraud, provided a two months' sentence was imposed. The judge ordered the plea of guilty withdrawn and continued the case to June 20.——In the case of Norbert O. Bourque, a graduate of the National University, charged with a similar offense, action was deferred by the State Board of Health, pending the obtaining of further evidence. This individual is said to have signed one diploma, but alleges that he did not know what he was doing.

MARYLAND

Personal.—Dr. James T. Johnson has been appointed secretary of the Cumberland City Board of Health.——Dr. John E. Sanbury, Forestville, has been re-elected health officer of Prince George county.

Board Forced to Reciprocate.—By the recent decision of the District of Columbia Court of Appeals, noted in the *Bulletin of the Medical and Chirurgical Faculty of Maryland*, the action of the Washington Board of Medical Examiners in refusing Dr. Louis B. Thompson, a Maryland physician, a license to practice in the District of Columbia, was declared arbitrary, and license has been issued by application of the court. The application of Dr. Thompson was originally denied by the board on the ground that the examination of the Maryland board was not equivalent to that of the District of Columbia. The court, however, declares that "equivalent conditions exist under the statute by virtue of the provisions of the law, and not under the rules and regulations of the board, as is claimed." A similar suit for a reciprocal license from the District Board instituted by Dr. Henry H. Hazen in March, 1909, was decided in the same way.

Home for Widows and Orphans.—In December last, the foundation of a home for widows and orphans of medical men by the Medical and Chirurgical Faculty of Maryland, was noted. Unanimous action was taken, and a board of managers, consisting of twenty-four persons, was appointed. The board proceeded to adopt active measures to raise funds to inaugurate the home, one of which was application to the legislature. The society would not permit this on the ground that it might jeopardize the application of the society for an appropriation to pay off the debt on the new building. This dispelled the prospect of an early opening and deprived the board of a large part of the support on which it relied. At the annual meeting of the society, a committee, consisting of Drs. William H. Welch, William S. Thayer and William S. Gardner, was appointed to report on the home project, and after taking legal advice, reported that the charter of the society gave no authority for the project, and recommended that the resolution of December 16 be rescinded. This was done and a motion was also voted down, having for its object the securing of legal sanction for carrying on the home. The board of trustees, however, was not willing to abandon the project, and decided to continue the organization under an independent state charter. Mrs. Eugene F. Cordell, president of the board, announces that while the "Fund for the Relief of Widows and Orphans" still remains in the hands of the state society, and is limited to its membership, the "Home," has become divorced from it, and will be conducted hereafter independently and for the benefit of the entire medical profession.

Baltimore

Honors for Porto Rican.—Miss Palmira Gattell, daughter of the head of a drug firm in Porto Rico, won the gold medal for superior scholarship at the Woman's Medical College. She will practice in San Juan.

Alumni Meeting.—The annual meeting of the Alumni Association of Baltimore Medical College was held May 2 and the following officers were elected: President, Dr. James M. Delevett; vice-president, Dr. James E. Poulton; secretary, Dr. John A. Evans, and treasurer, Dr. Harry E. Peterman.

Portrait of Dr. Osler.—A bronze relief portrait of Dr. William Osler has been placed in Osler Hall of the Medical and Chirurgical Faculty. It is by F. C. V. de Vernon, a French sculptor, and is an enlargement of a small one made in 1903 by the same artist and now in the Johns Hopkins Medical Library. It will be placed by the side of the Osler portrait by Corner on the north wall, and on the other side will be hung the Welch medallion.

Personal.—Dr. Ira Remsen, president Johns Hopkins University, sails for Europe June 14.——Dr. Claribel Cone sailed for Germany May 26.——It is reported that Dr. Harvey W. Cushing has been offered and has accepted a position in Brigham Hospital, Harvard University.——Dr. Charles E. Simon has sailed for Switzerland.——Dr. Edward Hume and family have returned to their station in Changsha, China.——Dr. Frank C. Bressler has sailed for Europe.——Dr. George W. Dobbin, who was recently injured in an automobile collision, is reported to be convalescent.

Dr. Cushing's New Appointment.—It is officially announced by the trustees of the new Peter Bent Brigham Hospital at Cambridge, Mass., that Dr. Harvey W. Cushing, of Johns Hopkins Hospital, has been appointed chief of the surgical staff. He will not leave Baltimore until the completion of the hospital, about two years hence.——Dr. E. Deichmann, principal of the Deichmann College Preparatory School, has been reappointed state examiner for the medical, dental and pharmaceutical colleges of this city (except Johns Hopkins Medical School, which requires an A.B.). Henceforth formal written examinations will be held in the school building in August, September and October.

Commencements.—The Woman's Medical College held its twenty-eighth annual exercises May 30, graduating a class of six. President Eugene A. Noble of Goucher College delivered the address.——Maryland Medical College held its annual commencement exercises May 30. Dr. Joseph L. McLaughlin of New Hampshire received the gold medal for scholarship.——Baltimore Medical College held its twenty-ninth annual commencement exercises May 26, graduating a class of fifty-four. The Hippocratic oath was administered by President Charles G. Hill of the college and the announcement of graduates was made by Dean David Street.——The University of Maryland held its one hundred and third commencement June 1. There were 241 graduates, viz.: St. John's (arts and sciences), 17; medicine, 85; law, 60; dentistry, 54; pharmacy, 25. Hon. Henry B. Macfarland of Washington, D. C., delivered the address. The honorary degree of LL.D. was conferred on Dr. Henry R. Carter, U. S. Public Health and Marine-Hospital Service, a graduate of the year 1879.——At its thirty-eighth annual commencement, June 2, the College of Physicians and Surgeons graduated 66, Prof. William T. Councilman, of Harvard University, delivering the address to the graduates. Those receiving gold medals were: Roy W. Locker, Ohio; Harris Goldman, Maryland; William B. Hunter, West Virginia; W. D. Blankensmith, Ohio. Dr. Charles E. Simon has been elected professor of clinical pathology and experimental medicine.——At the commencement of Johns Hopkins University, June 14, the degree of M.D. will be conferred on 68 graduates. The German Ambassador will deliver the address to the g uates.

NEW YORK

Reciprocity With New Jersey Denied.—Owing to the lowering of the standard of preliminary education required for admission to the medical schools of New Jersey, they being below the standard required for admission in New York State, the Board of Regents annulled the reciprocal relations between New Jersey and New York.

Antitoxin for Tetanus.—There are annually one hundred deaths in this state from tetanus as the result of accidents, the majority of which are due to Fourth of July celebrations. Health Commissioner Porter has issued a notice to local health officers urging them to procure from the state a supply of tetanus antitoxin for use in emergencies.

City Can Bar Up-State Milk.—A suit against the New York City Board of Health to recover damages because the plaintiff's milk was rejected at the Cold Spring Creamery, which alleged that it was unfit for consumption, has been decided in favor of the New York Board of Health. The judge held that the New York City Board of Health had absolute jurisdiction without as well as within the city lines, and could impose whatever rule and regulations its officials wished, and compel their observance under penalty of prohibiting the sale of dairy products shipped to New York for consumption as food. It is said that the dairymen will appeal the suit.

Personal.—Dr. Edgar A. Vander Veer, Albany, has succeeded Dr. Irving S. Haynes, New York City, as a member of the Medical Board of the Champlain Valley Hospital.——Dr. and Mrs. William H. Montgomery were given a dinner by the staff of the Willard State Hospital, May 10, on the occasion of Dr. Montgomery's transference to the Long Island State Hospital, King's Park, where he becomes second assistant physician.——Dr. Robert S. MacDonald, formerly first assistant physician to the Dannemora State Hospital, has opened an office in Plattsburgh.——Dr. Edward G. Cox, Albany, was injured in an automobile accident near Loudenville, May 25.

State Board of Regents Makes Appointments.—Dr. William Warren Potter and Dr. Lee H. Smith, Buffalo, and Dr. Glentworth Reeve Butler, Brooklyn, have been appointed on the State Board of Medical Examiners; Prof. James Law, Ithaca, Dr. C. F. Greenside, New York, Dr. R. C. Reed, Elmira, Dr. H. S. Beebe, Albion, and Dr. George A. Knapp, Millbrook, have been appointed on the State Board of Veterinary Examiners; Dr. A. M. Holmes and Dr. H. H. Burkhart have been reappointed and Dr. E. C. Parker of Poughkeepsie, appointed on the State Board of Dental Examiners; Charles F. Prantice and George R. Fox have been appointed examiners in optometry.

Bills Signed by the Governor.—The bill lowering the standard of milk so that it shall be considered adulterated when it contains less than 11½ instead of 12 per cent. of milk solids.——The bill providing that when a convicted murderer appears insane, the Governor may appoint a commission of three to examine him and to report to the Governor, whereupon, if found insane, the Governor may order his removal to a state hospital for insane convicts, where he shall be kept in custody until cured of his insanity, when, on an order of the justice of the supreme court, the convict is to be returned to the warden of the state's prison to suffer the sentence given him under the law.——A bill signed by Governor Hughes creates a new State Board of Pharmacy of nine members, to be appointed by the State Board of Regents, to take the place of the present board of fifteen members. This law is favored by the State Pharmaceutical Society and establishes a standard for drugs and medicines.

New York City

Women Physicians Dine.—The alumnæ of the New York Women's Medical College held their annual dinner at the Hotel Manhattan on the evening of June 1.

Measles on Ocean Liner.—The Cunard steamer, Pannonia, arrived from the Mediterranean, May 26, with more than twenty cases of measles on board. The patients were removed to Hoffman's Island.

Professional Building.—The Herald Square Health Co. is about to erect, on a lot 40x102 feet off West Seventy-first street, an eight-story building to be devoted entirely to the use of physicians and dentists.

Berlin Professor to Lecture in New York.—Dr. E. Grawitz, ssor of pathology in the University of Berlin, will deli ress in English before the New York Academy of icine on "The Definition of Pernicious Anemia and its Treatment."

Summer Home Opens.—The Association for Improving the Condition of the Poor has opened the Sea Breeze Home. By the middle of the month the Home will be filled to the fullest capacity. The cost of maintaining this resort is $90,000 for the season.

Death-Rate Drops.—The week ending May 20 showed a decrease in the death-rate from the corresponding week of 1909. The rate for 1909 was 16.76, while for 1910 the rate was 16.10. Pneumonia and heart disease caused fewer deaths than last year, while diphtheria caused more.

Personal.—Dr. and Mrs. Thomas E. Satterthwaite have sailed for Europe.——Dr. Maurice H. Gross has opened an uptown office in the Sydenham Building.——Dr. Abraham L. Wolbarst has been appointed delegate from the Peace Society of New York to the eighteenth International Peace Congress, to be held in Stockholm, Sweden, August 1 to 6.

Hospital Outgrows Quarters.—The German Hospital, situated at St. Nicholas avenue and Stanhope street, has been forced to authorize the construction of an annex that will cost $25,000. The proposed annex will provide for three wards and will be ready for occupancy in about three months. The funds for the increased expenses of the institution have not yet been provided, but the Hospital Benefit Society is preparing a benefit.

Equality League Branch Formed.—At a meeting held in Belmont Municipality Hospital, Hempstead, L. I., May 23, the woman physicians' and surgeons' branch of the Political Equality League was formed with the following twelve charter members: Drs. Jennie V. H. Baker, Brooklyn; Mary E. Pelton, Anna H. Shaw, Mary L. Lines, Brooklyn; Mary E. Fish, Sophie B. Scheel, Brooklyn; Cornelia C. Brant, Brooklyn; Mary Halton, Harriet Van Buren Peackham, Brooklyn; Harriet W. Hale, Brooklyn; Rachel R. Nottage, Brooklyn, and Kate MacLaren, Borough of Queens.

PENNSYLVANIA

King Edward Memorial.—At a meeting held at Pittsburg, June 5, $25,000 was subscribed towards erecting a memorial to the late King Edward VII. The building to be erected is to be a part of the proposed tuberculosis hospital of Pittsburg.

Memorial Annex to Hospital.—The Board of Managers of the Chester Hospital has accepted an offer from Mrs. Charles B. Houston to erect a building in connection with the hospital to be known as the "C. B. Houston Children's Ward," in memory of her deceased husband.

Personal.—Dr. W. T. Miller has returned to take up his permanent residence in McKeesport.——Dr. Ehlers, an assistant resident physician in the male department of Norristown State Hospital, has resigned.——Dr. Rothe has been appointed intern for the female department of the hospital.

Sanatorium Favored.—Dr. Samuel G. Dixon, State Commissioner of Health, sent a letter approving the action of the Central Poor Board of Wilkes-Barre in arranging to build a sanatorium for caring for the indigent victims of tuberculosis. The work will not interfere with the activity of the state in the same direction.

Philadelphia

Polyclinic Faculty Changes.—Dr. John H. Jopson was elected professor of surgery; Dr. Wendell Reber, professor of ophthalmology, and Dr. William Zentmayer, extramural lecturer in ophthalmology. With the exception of these three changes the faculty of the institution will remain the same as last year.

Jefferson's New Laboratory.—Jefferson Medical College has purchased the old building of the Pennsylvania Dental College at Eleventh and Clinton streets, for a consideration of $47,500. The lot is 40 by 116 feet with a lot in the rear 40 by 60 feet. No important changes will be made in the building for the present and it will be used as a laboratory.

Museum Grounds Transferred.—An ordinance passed by the common and select council gives the University of Pennsylvania the possession of a large tract of land along the western shore of the Schuylkill river, south of Pine street. The grounds and buildings at present are occupied by the Commercial Museum of Philadelphia, who are to remain in possession until the city provides another site for the museum. The University in return is to give the city seventy-five scholarships annually, the distribution of which rests with the mayor of Philadelphia.

Medico-Chirurgical Alumni Banquet.—The annual banquet of the Medico-Chirurgical College was held in the Bellevue-Stratford, June 2. About 400 men were present and Dr. John Egan presided. Addresses were made by Hon. Henry F. Walton, president of the board of trustees; Dr. J. W. Holland, dean of Jefferson Medical College; Hon. Edwin S. Stuart, governor of Pennsylvania; Hon. John Reyburn, mayor of Philadelphia; Dr. Ernest LaPlace and Mr. A. E. Hetherington. The following officers were elected: Dr. C. T. Faries, president; first vice-president, Dr. Edward Guyon; second vice-president, Dr. W. A. Sears; third vice-president, Dr. E. F. Bickel; secretary, Dr. E. H. Erney; treasurer, Dr. E. S. Gans.

Rush Hospital Addition Open.—The completed portion of the Rush Hospital for the treatment of consumption, was opened for the inspection of the public, May 21, and opened for patients, May 23. This hospital was one of the first in the country for treating tuberculosis, and beside its city plant has a country branch at Malvern, Pa. Facing on Thirty-third street, the new addition contains administration rooms, dispensaries, an apothecary shop, nurses' quarters and rooms for private patients. The building is finished in the most approved hospital style, without corners. At present the addition is but two stories, but when completed (when sufficient funds are raised) will be four stories.

Jefferson Alumni Banquet.—The annual banquet of the Alumni Association of the Jefferson Medical College was held in the Bellevue-Stratford, June 4, with nearly 500 men present. Dr. J. M. Fisher presided and addresses were made by Dr. S. Weir Mitchell, who this year celebrates the sixtieth anniversary of his graduation from this institution; Hon. Edwin S. Stuart, governor of Pennsylvania; and Dr. Lawrence F. Flick, who spoke for the alumni. A special feature of the meeting was the presentation of an oil portrait of Hon. William Potter, president of the board of trustees. The presentation was made by Dr. J. Chalmers Da Costa and accepted by Mr. Simon Gratz, secretary of the board. At the same time a large silver loving cup was presented to Mr. Daniel Baugh, a member of the board of trustees, by the hospital staff, in recognition of his services as chairman of the hospital committee. The cup was presented by Professor H. A. Hare.

College Commencements.—The eighty-fifth annual commencement of the Jefferson Medical College was held at the Academy of Music, June 6, 1910. The graduates numbered one hundred and forty-two, and received their diplomas from Hon. William Potter, president of the board of trustees. Three features of the commencement made it especially notable. A glowing tribute to the memory of Professor Samuel D. Gross was made in an address by Dr. William W. Keen, and announcement was made of the endowment of a chair in surgery by Mrs. Maria Gross Horwitz as a memorial to her father, to be known as the Samuel D. Gross chair of surgery. Professor J. Chalmers Da Costa was elected to fill the position. The degree of LL.D. was conferred on Dr. S. Weir Mitchell, marking the occasion as the sixtieth anniversary of his graduation from the college. A portrait of the dean of the college was presented to the trustees by Dr. William L. Rodman in behalf of the Alumni Association. An oil portrait of Dr. J. W. Holland, dean of the college, was presented to the Board of Trustees by the Alumni.——The thirtieth annual commencement of the Medico-Chirurgical College was held in the Academy of Music, June 3. Eighty-four men received diplomas and the annual address was delivered by Hon. David J. Foster, of Vermont. Forty-nine hospital appointments were received by members of the graduating class.——The annual commencement of the Women's Medical College of Pennsylvania was held in the Academy of Music, June 2. Thirty women received degrees and the address to the class was made by Dr. Ira Remsen of Johns Hopkins University.

VIRGINIA

Commencement Exercises.—The seventy-second annual commencement exercises of the Medical College of Virginia, Richmond, were held May 18. Dr. Simon Baruch, New York City, delivered the address before the alumni association, "The Therapeutic Lesson of Half a Century," and President Lyon G. Tyler of William and Mary College gave as his commencement address, "Medical History of the State from 1607 to the Present Day." Diplomas were delivered to a class of thirty-seven by Dr. Christopher Tompkins, Dean of the College.——The University College of Medicine, Richmond, held its annual commencement exercises, May 17. The annual address was delivered by Dr. Stuart McGuire, Dean of the Faculty and diplomas were conferred on a class of twenty-two. Major James C. Hemphill, editor of the *Times-Despatch*, delivered the doctorate address.

GENERAL NEWS AND COMMENT

Section Officers.—The new officers of the sections of the Americal Medical Association for 1910-1911 are as follows:

PRACTICE OF MEDICINE—Chairman, Allen Arthur Jones, Buffalo; Vice-Chairman, Charles L. Greene, St. Paul; Secretary, Wilder Tileston, New Haven; Delegate, J. A. Capps, Chicago; Alternate, Alexander Lambert, New York; Orator, C. F. Hoover, Cleveland, Ohio.

OBSTETRICS AND DISEASES OF WOMEN—Chairman, Horace G. Wetherill, Denver; Vice-Chairman, Fred J. Taussig, St. Louis; Secretary, C. Jeff Miller, New Orleans; Delegate, Arthur E. Benjamin, Minneapolis; Alternate, S. W. Bandler, New York.

SURGERY—Chairman, George W. Crile, Cleveland, Ohio; Vice-Chairman, Emmet E. Rixford, San Francisco; Secretary, John T. Bottomley, Boston; Orator, George E. Brewer, New York; Delegate, August F. Jonas, Omaha.

OPHTHALMOLOGY—Chairman, Albert E. Bulson, Jr., 219 Wayne St., Ft. Wayne, Ind.; Vice-Chairman, Edward C. Ellett, Memphis, Tenn.; Secretary, Edgar S. Thompson, New York; Delegate, John C. Bossidy, Boston.

LARYNGOLOGY AND OTOLOGY—Chairman, Roy Dunbar, Atlanta, Ga.; Vice-Chairman, W. E. Sauer, St. Louis; Secretary, George E. Shambaugh, Chicago; Delegate, H. W. Loeb, St. Louis.

NERVOUS AND MENTAL DISEASES—Chairman, W. A. Jones, Minneapolis; Vice-Chairman, Herman H. Hoppe, Cincinnati; Secretary, E. E. Southard, Boston; Delegate, Theodore Diller, Pittsburg; Alternate, J. H. McBride, Pasadena.

PREVENTIVE MEDICINE AND PUBLIC HEALTH—Chairman, W. A. Evans, Chicago; Vice-Chairman, Marshall Langton Price, Baltimore; Secretary, C. Hampton Jones, Baltimore; Delegate, J. N. Hurty, Indianapolis; Alternate, J. H. White, New Orleans; Orator, W. A. Evans, Chicago.

STOMATOLOGY—Chairman, S. L. McCurdy, Pittsburg, Pa.; Vice-Chairman, Virgil Loeb, St. Louis; Secretary, Eugene S. Talbot, Chicago; Delegate, G. V. I. Brown, Milwaukee, Alternate, M. H. Fletcher, Cincinnati.

DISEASES OF CHILDREN—Chairman, S. M. Hamill, Philadelphia; Vice-Chairman, Thomas D. Parke, Birmingham, Ala.; Secretary, L. T. Royster, Norfolk Va.; Delegate, A. C. Cotton, Chicago.

DERMATOLOGY—Chairman, James C. White, Boston; Vice-Chairman, Martin F. Engman, St. Louis; Secretary, H. R. Varney, Detroit; Delegate, J. A. Fordyce, New York.

PHARMACOLOGY AND THERAPEUTICS—Chairman, Lawrence Litchfield, Pittsburg, Pa.; Vice-Chairman, George B. Wallace, New York; Secretary, M. I. Wilbert, Washington, D. C.; Delegate, Reid Hunt, Washington, D. C.

PATHOLOGY AND PHYSIOLOGY—Chairman, Yandell Henderson, New Haven, Conn.; Secretary, Leo Loeb, Philadelphia; Delegate, Walter L. Bierring, Iowa City, Iowa; Alternate, M. J. Rosenau, Boston.

GENITO-URINARY DISEASES.—Chairman, W. T. Belfield, Chicago; Vice-Chairman, James Pederson, New York; Secretary, Hugh H. Young, Baltimore.

Academicians Meet.—The annual meeting of the American Academy of Medicine was held in St. Louis, June 4 and 6, and the following officers were elected: President, Dr. Charles S. Sheldon, Madison, Wis.; vice-presidents, Drs. Adol Alt, St. Louis; Philip Mills Jones, San Francisco; Cyrus Lee Stevens, Athens, Pa., and Henry B. Hemenway, Evanston, Ill.

Gastro-Enterologists Elect.—At the thirteenth annual meeting of the American Gastro-Enterological Association, held in St. Louis, June 6 and 7, the following officers were elected: President, Dr. Walter B. Cannon, Boston; vice-presidents, Drs. John A. Lichty, Pittsburg, and George D. Kahlo, French Lick, Ind.; secretary-treasurer, Dr. Charles D. Aaron, Detroit, and councilor, Dr. Julius Friedenwald, Baltimore.

Orthopedists Hold Meeting.—At the annual meeting of the American Orthopedic Association, held in Washington, D. C., May 3-5, the following officers were elected: President, Dr. Albert H. Freiberg, Cincinnati; vice-presidents, Drs. Aurelius R. Shands, Washington, D. C., and Robert B. Osgood, Boston; secretary, Dr. Ralph R. Fitch, Rochester, N. Y. (reelected), and treasurer, Dr. Gwilyn G. Davis, Philadelphia.

Pathology of Plague.—The Surgeon-General of the United States Public Health and Marine-Hospital Service reports that during the past year the Federal Plague Laboratory at San Francisco has furnished pathologic specimens showing the lesions of rodent plague to all medical colleges in the United States which have requested them. In this manner one hundred and four institutions have added plague material to their pathologic laboratories.

New Officers of Medical Editors' Association.—At the annual meeting of the American Medical Editors' Association, held in St. Louis, June 4 and 6, the following officers were elected: President, Dr. Joseph MacDonald, Jr., New York City; vice-presidents, Surgeon-General Walter Wyman, U. S. P. H. and M.-H. Service, Washington, D. C., and Dr. Thomas L. Stedman, New York City; secretary-treasurer, Dr. John J. Taylor, Philadelphia, and executive committee, Drs. Wallace C. Abbott, Chicago; Cyrus Lee Stevens, Athens, Pa., and Anthony G. Kreidler, Cincinnati.

Insurance Examiners Hold Meeting.—The American Association of Medical Examiners held its annual meeting in St. Louis, June 6 and 7, and adopted resolutions approving the national department of public health, and extending thanks to the members of the profession who have been pioneers in the endorsement of this proposition of having a medical scientist in charge of the new portfolio. The following officers were elected: President, Dr. Liston Homer Montgomery, Chicago; vice-presidents, Drs. W. Edward Grant, Louisville; William T. Tilly, Muskogee, Okla.; James Taggart Priestley, Des Moines, and C. T. Cutting, Seattle; secretary, Dr. Allen E. Cox, Helena, Ark., and treasurer, Dr. Thomas A. Stevens, Caney, Kan.

Change in State Board Statistics.—A graduate of George Washington University Medical Department calls our attention to the fact that in the state board statistics published in THE JOURNAL, May 21, 1910, three graduates of George Washington University Medical Department who passed the license examination in West Virginia had been reported to us as graduates of Georgetown University School of Medicine, and had, therefore, been accredited to the latter school. This correction decreases very slightly the failure percentage of the former school and increases that for the latter, but in neither case is the difference sufficient to change the classification of the college named.

Meeting of Licensing and Examining Boards.—At the annual meeting of the National Federation of State Medical Examining and Licensing Boards, held in St. Louis, June 6, Joseph C. Guensay, Chicago, was elected president; Drs. James A. Egan, Springfield, Ill., and Charles A. Tuttle, New Haven, Conn., vice-presidents; Dr. George H. Matson, Columbus, O., assistant treasurer; Dr. Darlington J. Snyder, Columbus, O., assistant secretary-treasurer; Drs. Albert H. Hamel, St. Louis, Mo., Nathaniel R. Coleman, Columbus, O., Edwin B. Harvey, Boston, James A. Duncan, Toledo, and Daniel P. Maddux, Chester, Pa., members of the executive council, and Drs. W. Fred Singer, Pueblo, Colo., and Fred C. Zapffe, Chicago, members of the newly organized examining committee.

Dr. Cushing Accepts Position at Harvard.—Dr. Harvey Cushing, head surgeon at the Johns Hopkins Hospital at Baltimore, has accepted the office of surgeon-in-chief of the proposed Peter Bent Brigham Hospital, the new teaching hospital of Harvard University Medical School. With the appointment also of Dr. Henry A. Christian, dean of the Harvard Medical School, as physician-in-chief of the hospital, the two leading places on the staff are now filled. Dr. Cushing was born in Cleveland in 1869 and comes of a distinguished medical family, both his father and his grandfather having been prominent physicians. Dr. Cushing graduated from Yale University in 1891 and from Harvard Medical School in 1895. In 1897 he received the appointment of resident surgeon at the Johns Hopkins Hospital at Baltimore, since which time he has been constantly associated with both the Johns Hopkins Medical School and Hospital, and for some years has been the associate professor of surgery in the medical school. Since 1901 Dr. Cushing has devoted his attention principally to neurologic surgery and his skill, shown in operations on tumor of the brain, as well as for injuries to the spinal cord and on various superficial nerve paralyses and neuralgias, have brought him in the front rank of American surgeons. The Peter Bent Brigham Hospital will not be completed until about 1912, which means that Dr. Cushing will not take up his residence in Boston until that time. The fund for the new hospital has been accumulating for about twenty-five years and the original bequest of $1,800,000 has grown to about $8,000,000. The hospital building will be of brick with stone trimmings and the estimated cost exceeds $1,000,000. In preparing for this hospital the trustees believed that to fulfill its highest purpose it should not only care for the sick but should serve an educational purpose to both medical students and practicing physicians. For that reason they decided to ally themselves with Harvard Medical School and the prospects are that this hospital will some time stand among the greatest hospitals in the world.

LONDON LETTER

(From Our Regular Correspondent)

London, June 3, 1910.

The Recognition of Medical Gynecology

About twenty years ago, before the modern developments of abdominal surgery, diseases of women were treated by "obstetric physicians," men who specialized on midwifery and on the minor gynecology of that time, but who never opened the abdomen. If a laparotomy was necessary the case had to be transferred to a surgeon. With the great development of operative gynecology that specialty has become a branch of surgery and is now practiced only by surgeons. Necessary and beneficial as this change is, it has one unfortunate consequence. The greater part of the work of gynecologists is devoted to the elaborate technic of abdominal surgery and in the medical schools they teach the students little else. But when the latter become general practitioners they have to treat diseases of women which generally require other than surgical treatment, about which they have learned little. They have spent their time in learning about elaborate abdominal operations which they cannot be expected to perform. Since the recent death of Dr. John W. Taylor, professor of gynecology at Queen's College, Birmingham, the successor of Lawson Tait, it has been decided to avoid this evil by rearranging the teaching of the department. It is suggested that the chair of gynecology shall be given up and that the course be called "midwifery and diseases of women," and be under the supervision of the professor of midwifery, who will deliver two-thirds of the lectures. The remaining third are to be delegated to an assistant or lecturer, who will teach the subject of diseases of women in a form suitable for the requirements of students in the after-practice of their profession. There will be no divorce between medicine and surgery, but the relative value of each will be duly estimated and explained.

Further Decline in the Birth-Rate

The summary of the vital statistics for 1909 has just been published and shows a further decline in the birth-rate. The marriage-rate was 14.6, which was 0.3 below the rate for 1908 and 1.1 below the average rate in the decade 1898-1908. The birth-rate was 25.6 per 1,000, which was 0.9 below the rate for 1908 and is the lowest on record. Compared with the average for the previous decade there was a fall of 2.2. The death rate was 14.5 per 1,000, which was 0.2 below the rate in 1908 and is the lowest on record. Compared with the average of the previous decade there was a fall of 1.6. This fall is due to diminution of the infant mortality, which has more than counterbalanced a slight increase at the other end of life. The infant mortality, measured by the proportion of deaths under the age of one year to the births, was 109 per 1,000, which was 11 below the rate for 1908, and lower than any rate on record. The reduction in the infant mortality has been mentioned in previous letters to The Journal and shown to be due to instruction of mothers and increasing care in the rearing of infants. The present reduction is all the more remarkable in that it has followed the considerable fall which has taken place since 1901. In London the marriage rate was 15.8, the lowest on record. Similarly the birth rate was 24.2, the lowest on record. This rate was 1 below that for 1908, and no less than 3.4 below the average for the previous decade. In the main the fall in the birth-rate is due to diminished fertility of married women. In 1867 the rate was 36.5, so that a fall of one-third has taken place in the last half century. For the first time since 1905 smallpox appears as a cause of death, two fatal cases having occurred.

The Output of Drugs and Chemicals in the United Kingdom

As the result of a recent law, called the Census of Production Act, reliable figures are for the first time available as to the quantity of drugs and chemicals produced in the United Kingdom. Forms were sent to all the manufacturers engaged in these industries, on which they were compelled to state the articles manufactured, the quantities manufactured, the quantities sold, the value of the articles, and the number of the work-people employed. The gross output of factories engaged in the manufacture of chemicals, drugs and perfumery in the past year is valued at $115,000,000, and the cost of the materials used at $66,000,000. The number of persons employed is 51,088. The following are some of the most interesting items: Drugs and galenical preparations, $12,000,000; fine pharmaceutical chemicals (alkaloids, chloroform, ether, etc.), $8,000,000; "patent medicines," *i. e.*, nostrums, $11,000,000; prepared foods for infants and invalids, $2,800,000; druggists' sundries, $6,400,000; essential oils, $455,000; perfumed spirits, $1,500,000.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 27, 1910.

Serious Disturbances at the Concours d'Agrégation

The tumultuous incidents will be recalled following which the *concours d'agrégation*, opened in December, 1908, was adjourned (The Journal, Jan. 16, 1909, lii, 223). Since then no new *agrégés* have been recruited. The government at last decided to announce a new *concours*. In the first session, which took place May 23, and which was to have been entirely devoted to calling the roll of the candidates, great violence broke out. When the members of the jury, preceded by the president, Dr. Landouzy, entered the great amphitheater, they were greeted by an explosion of cries and whistles. The noise was so great that Dr. Landouzy, after having tried in vain to speak a few words, was obliged to name the candidates by writing their names on the blackboards. Among the candidates were some who had entered only to disorganize the *concours*. They did not confine themelves to tumultuous shouts at the jury, but threw at them eggs and tomatoes.

The second day was marked by still greater violence. The college of medicine was occupied by police which tended to augment the disturbance among the candidates. A police officer arrested a rioter who had just thrown an egg at members of the jury; this was the signal for a regular riot between the police and the candidates. Several rioters were arrested. During the evening M. Briand, the premier, received a delegation of practitioners who came to request the liberation of the physicians and students arrested during the riot, and the withdrawal of the police. M. Briand replied that it appeared to him intolerable to allow the candidates to assault the members of the jury. Tomatoes, eggs and blows with canes did not constitute arguments. The premier added that if the violence continued the duty of the government would be not to refuse the police to assure order at the *concours*, and that the best way for the delegates to obtain the liberty of their comrades would be to stop the violence.

On the other hand, the group of "serious candidates" had drawn up a protest against the obstruction practiced by a small group of disturbers, against the violence to which the members of the jury have been subject, and against the interference with the rights of the candidates to compete in conformity with the laws and regulations. At present, thanks to the very energetic measures which have been taken to restore order, the *concours* has been resumed, but access to the ampitheater where the sessions are held is no longer open to the public. To assure the legal publicity of the sessions, however, at the opening of the doors, besides the candidates, the twenty persons who first present themselves are allowed to enter and the numerous seats left are occupied by municipal guards and the police.

Election of Professor Gaucher to the Academy of Medicine

In its session on May 25, the Académie de Médecine elected a member in the section of medical pathology to replace Professor Brissaud, who died last December. The academy elected Professor Gaucher, who is the successor of Professor Fournier in the chair of syphilitic and cutaneous diseases at the Paris College of Medicine.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, May 26, 1910.

Antituberculosis Conference

At the meeting of the German central committee for the campaign against tuberculosis referred to in my previous letter, Professor Nietner presented the business report. According to this about $40,000 (167,000 marks) was expended by the central committee during the last year for the establishment of sanatoria and other tuberculosis institutions. There are now available 99 public sanatoria with over 11,000 beds for adult tuberculous patients, in addition to 74 private sanatoria with 1,972 beds. Children with pronounced tuberculosis may be admitted to 18 sanatoria with 810 beds, and 89 institutions with 8,000 beds are provided for scrofulous children. In addition, there are 93 forest convalescence stations and 11 forest schools; 15 convalescence homes also receive tuberculous patients, and 9 observation stations permit the selection of patients for the sanatoria. There are 325 special dispensaries and advising stations for tuberculosis in Germany. The important relation between tuberculosis and the dwelling was discussed both at the general meeting and at the directors' meeting of the German central committee. According to Professor Römer of Marburg the chief cause for the spread of human tuberculosis is man himself. Almost every human being passes out of childhood already subject to tuberculous infection. In 90 per cent. of tuberculous individuals it is demonstrable that infection with tubercle bacilli occurred in childhood. The origin of tuberculous consumption in adults is to be attributed to a severe reinfection with tuberculosis from some tuberculous focus already present in the organism. The severe infections of children which result in consumption take place principally in the dwelling and within the family. The protection of children is therefore the most important problem in the prophylaxis of consumption.

Gretsel of Darmstadt, national housing inspector, treated this question from the practical standpoint, emphasizing that the common occupancy of small rooms by many individuals contributes very largely to the spread of tuberculosis. In Berlin, half of all the dwellings, namely, 197,000 (in which about half of the entire population live) consist of only a sitting room and kitchen. Thirty-three thousand apartments have only one room that can be warmed, 2,400 have no room that can be warmed, and 4,086 apartments consist exclusively of a kitchen in which sometimes as many as twelve persons live. In other large cities and in the country the conditions are quite as bad. For this reason, in addition to securing normal housing conditions, the provision of cheap, good and sanitary apartments for the less well-to-do classes in both city and country is urgently needed. The tuberculous patient ought to have his own room or at least a bed to himself, and in case of moving or death thorough disinfection should be done and, in case of need, beds should be provided. The sanitary renovation of dwellings must be undertaken at public cost, if the occupants of the house have not the necessary means. Compulsory notification of tuberculous cases must be introduced. A housing reform for the entire German empire must be carried out by legislative means. According to the statements of Professor Kirchner there exists so far no requirement to disinfect the dwelling on occasion of change of residence of tuberculous patients, or illness of members of the family from tuberculosis. There does not seem to be much prospect of legislative action to remedy this deficiency. At the suggestion of the minister of education, many communities in the last two years have indicated their readiness to undertake disinfection at public expense. The essential thing is the education of the population in cleanliness and hygiene by public instruction. Healthy children should be removed from families where disease is present and placed in healthy families to be brought up. Kirchner does not agree with Professor Römer that tuberculosis is almost exclusively acquired, nor that scarcely any human being is free from tuberculosis. According to his opinion, only those who are in the environment of tuberculous patients are endangered. Professor Petrouschky of Danzig is like Römer of the opinion that tuberculosis is acquired in childhood as a rule. Gottstein of Charlottenburg called attention to the appearance of tuberculosis in groups in various localities of the city in which the density of the population plays a prominent rôle.

The president of the imperial health office, Dr. Bumm, discussed the question whether it is necessary to obtain the permission of the patient or, in case of children, the permission of the parents before making the tuberculin skin test of von Pirquet. His conclusions were in the affirmative on the ground that otherwise physicians might be involved in litigation. In the discussion this opinion was concurred in by most of the speakers. Very favorable experiences in regard to the value of the von Pirquet test in the campaign against tuberculosis in schools were reported. One speaker urged compulsory vaccination of all school children. Experience shows that patients discharged from sanatoria find difficulty in obtaining new employment, and there was considerable discussion on measures for removing this difficulty. A combination of intelligence offices, the establishment of workshops and agricultural colonies, enlightenment of employers and similar methods were recommended. The relations of glass grinding and metal polishing and basket making to the spread of pulmonary tuberculosis were discussed by Professor Nietner, the general secretary. On account of the possibility of mechanical injury of the respiratory mucous membrane by sharp angles and points, stone dust, metal and glass dust are among the most dangerous forms. The harder the material under manipulation, the more dangerous must be the dust. As in grinding glass the work is done without exception with wet material, the development of dust is prevented and tuberculosis is not frequent among these workers. Tuberculosis is also rare among metal grinders because the workshops are adapted to modern hygienic requirements. The frequent occurrence of tuberculosis among basket workers does not depend on the trade *per se* but is to be attributed to the bad social condition of these workmen.

Pharmacology

SARTOLIN

Another Consumption "Cure"

When an American quack or nostrum-vender has milked his gullible native clientèle dry he often transfers his field of operations to Europe where he goes through the same process. In a like manner when a nostrum has worn out its welcome in Europe its astute exploiter casts his lines in American waters in hope of relieving the credulous sick of their dollars.

Sartolin is a "consumptive cure" which had its origin several years ago in Germany, its "inventor" being one Robert Schneider of Berlin. Apparently it did not take very long for this nostrum to be discredited in the land of its birth, and then advertisements began to appear in the British newspapers extolling the wonderful virtues of sartolin and detailing its "cures." Still more recently the newspapers in this country recorded the fact that "Dr." Robert Schneider of Berlin had arrived in the United States and was on his way to Chicago where he "would demonstrate his method of curing consumption." Now we find that the "U. S. Head Office & Depot" of the Sartolin Company is located in Chicago.

According to the booklet put out by the Chicago concern, Sartolin is "the newly discovered treatment for consumption and kindred diseases" and has been patented in the United States. Further we learn that the "treatment" consists of vaporizing the mixture which constitutes sartolin, and inhaling the fumes. According to the patent specifications sartolin seems to be composed of:

Powdered eucalyptus leaves	7.5
Oil of eucalyptus	4.5
Flowers of sulphur	63.0
Powdered wood charcoal	25.0

A small amount of this mixture is placed on a slab under which an alcohol lamp is burning. The whole thing is supposed to be operated in a room that is tightly closed and in which the tuberculous patient is required to stay. As the booklet of directions puts it: "The fumes are breathed in a closed bed-room during the night ...." In the advertising matter the open-air treatment is belittled and serum therapy designated as valueless. The victim is urged to use the "sartolin treatment," which consists in shutting himself up for the night in a tightly-closed room to breathe the stagnant air laden with the products both of his own exhalations and of the combustion of the stinking mixture which forms the nostrum. If there are degrees of viciousness in the various fake cures for tuberculosis it would seem that sartolin surely should rank as one of the worst.

DIGEST OF COMMENTS ON THE U. S. P.

The work of the United States government in preparing for the new Pharmacopeia by issuing bulletins containing abstracts of the comments and criticisms which have been made on the eighth decennial revision was noticed in an editorial in The Journal, Nov. 27, 1909, p. 1824. The work for 1905 was embodied in Bulletin No. 49, Hyg. Lab. U. S. Public Health and Marine-Hospital Service. A similar bulletin for 1906 has since been issued and receives extremely favorable comment from a British authority, the *Pharmaceutical Journal and Pharmacist* (April 23, 1910, p. 510). Our contemporary says:

"As an example of thoroughness in the department to which it especially applies, Bull. No. 58 of the Hygienic Laboratory of the United States is probably unequaled anywhere."

After noting the change in the status of the U. S. Pharmacopeia incident to its becoming a legal standard, the *Pharmaceutical Journal* continues:

"This status of the U. S. Pharmacopeia as the official standard for determining the purity and strength of widely used medicaments could not be maintained on better material than is to be found in this digest, for the compilation of which the pharmaceutical and chemical literature of the whole civilized world has been ransacked in a way which, one is almost compelled to think, can only be done in America. The compilers having hit on what is undoubtedly the right way to go about it, have apparently left no leaf unturned in their efforts to find material which in any way dealt critically with official articles. Commendatory notices have been studiously ignored, on the ground that the value of a compilation of comments on the officially recognized standards must lie largely in the direction of recognizing shortcomings to be corrected and errors to be eliminated. It might be expected that a volume compiled on such lines would contain all the material necessary to make the Pharmacopeia to which it refers perfect in all respects. Doubtless it does contain this material, but unfortunately ideals in most things are very apt to become modified or distorted when practical politics step in. In the present case, while bearing in mind the need of efficient and active medicaments for the conservation of the public health, the desirability of maintaining equitable standards from an economic point of view must not be lost sight of. It is a sensible view to take of the question, and our hard-headed transatlantic friends may be trusted to profit by its acceptance. All the available suggestions have been collected by the compilers without comment, and while they appreciate the fact that many of the suggestions and claims put forward are not practicable, they are none the less valuable in that they are suggestions and serve to emphasize the care that must be exercised in the final utilization of these suggestions in connection with the revision of the national standards.

"The plan of Bulletin No. 58 is quite similar to that of Bulletin No. 49 and covers the literature for the year 1906. One may appreciate the thoroughness of the search made for comments and criticisms when one notes that not only medical and pharmaceutical journals have been examined, but even an engineering journal is quoted from on page 67 (*Chem. Eng.*, Philadelphia, 1906 and 1907)."

These collections of criticisms, more than anything else, probably, should receive the credit for any improvement shown in the next revision of the book. Physicians who are interested in an advanced materia medica cannot sufficiently show their appreciation of this work. They should write to the Hygienic Laboratory for a copy of Bulletin No. 58, which will be sent on request.

Correspondence

An Improvised Pneumatic Tampon for Nosebleed

To the Editor:—I lately had a case of nasal hemorrhage that I could not control by the ordinary anterior and posterior tampons. I cut a finger from a thin rubber operating glove, inserted a catheter, pushing it up to the closed end, and tied the cut end tightly about the catheter. This was inserted into the naris and inflated by blowing into the catheter. In this case I had to tampon the posterior naris and hold the tampon tightly in place with a thread through the nostril in order to keep the glove-finger from ballooning into the pharynx. The catheter was closed by doubling and tying or by catching with a hemostat, and was held out of the way by fastening to the cheek or neck with adhesive plaster. This controlled the hemorrhage and was much more comfortable than the tampons.

A. B. Stewart, Owatonna, Minn.

Another Case of Poisoning with Mercury Bichlorid

To the Editor:—Several cases of poisoning with corrosive sublimate have been reported recently. I wish to add one more; this one being unique in the manner in which the poisoning occurred. It also shows how easy it is for children to obtain this drug.

M. R., aged 16, while visiting in a small town, became infected with pediculus *capitis*. On the advice of her grandmother she went to a druggist and purchased 10 cents worth of corrosive sublimate powder. This was mixed with an equal quantity of lard and the entire amount of the mixture was rubbed into her scalp. In a few minutes intense burning arose, and became excruciating. The girl's head was cleansed with soap and warm water, and household remedies applied to relieve the burning. In an hour intense headache, nausea, vomiting and great prostration came on. A physician was summoned and worked with the patient twelve hours before she showed any signs of improvement. At the end of three days sloughing began. Ten days after the poisoning occurred the patient returned home. I was called to see her and found no constitutional symptoms worthy of mention. The hair was dry at the extremities but matted at the roots; the scalp was a mass of crusts and ulcers, some of the crusts being 2 inches in width. A wash of 1 per cent. compound solution of cresol and green soap was ordered to be used morning and night; nitrate of silver 60 gr. to the ounce was applied to the ulcers.

At the end of four weeks the scalp was entirely healed, but there were large areas entirely denuded of hair. A tonic of cantharides and quinin was prescribed. Two months ago, or ten months after the last previous time I had seen the patient she called at my office. She stated that she had undergone scalp massage and tonic treatments during the ten months. Her hair was glossy but sparse, and there were twelve areas varying in size from a dime to a half a dollar entirely denuded of hair, the scalp here being a pearly white and glistening. The grandmother had no doubt confused red precipitate and corrosive sublimate.

Arthur D. Kurtz, M.D., Philadelphia.

The Public Service

Medical Department, U. S. Army

Changes during the week ended June 11, 1910:

Sweazey, Verge E., capt., left Hot Springs, Ark., on 4 months' leave of absence.

Gregory, J. C., capt., left Jefferson Barracks, Mo., on 2 months' leave of absence.

Pinkston, O. W., capt., left Hot Springs, Ark., en route to take station at Fort Meade, S. D.

Weed, Mark D., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital, Takoma Park, D. C.

Allen, William H., 1st lieut., M. R. C., reported for duty at Fort Slocum, N. Y.

Schlanser, A. E., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital., Takoma Park, D. C.

Bastion, J. E., 1st lieut., M. R. C., reported for duty at Walter Reed General Hospital., Takoma Park, D. C.

Bailey, Howard H., capt., detached as surgeon of the transport *Sumner* for the voyage to Buenos Aires, Argentine Republic, sailing from New York, June 14.

Love, Albert G., capt., granted leave of absence for 10 days.

Pillsbury, Henry C., 1st lieut., in addition to his other duties, is assigned to temporary charge of the Medical Supply Depot, St. Louis.

Reynolds, Charles R., major, will proceed to Gettysburg, Pa., to investigate the sanitary condition of camp site.

Lauderdale, Robert N., dental surgeon, detailed to represent the Dental Corps of the Army at the meeting of the National Dental Association, to be held in Denver, July 19 to 22.

Shugerman, Harry P., M. R. C., honorably discharged from the service of the U. S., June 7, 1910.

Foster, George B., Jr., M. R. C., ordered to Washington Barracks, D. C., for temporary duty.

Register, Edward C., M. R. C., ordered to Fort H. G. Wright, N. Y., for temporary duty.

Sheep, William L., M. R. C., ordered to Fort Myer, Va., for duty with the 3rd Field Artillery, while on detached service at Gettysburg, Pa.

Long, Charles J., dental surgeon, will proceed from Fort Adams, R. I., to Fort Banks and Rodman, Mass., to render dental service in the Artillery districts of Boston and New Bedford.

Munson, Edward L., major, detailed for duty at American Lake, Wash., camps of instruction, during August, 1910.

Cole, Blase, M. R. C., ordered to report to the Commanding Officer, 16th Infantry, to accompany Headquarters Band and 2nd and 3rd Battalions, 16th Infantry to Seattle, Wash.

Gunckel, George I., dental surgeon, ordered to Fort Screven, Ga., for a period of 3 weeks.

The following named officers of the Medical Department are detailed to accompany troops to the camps of instruction at Gettysburg, Pa.: Waterhouse, Samuel M., major; Allen, John H., major; Bailey, Howard H., capt.; Webber, Henry A., major; Davis, William R., capt.

Kouper, Conrad E., major, granted leave of absence for 20 days.

Enders, William J., M. R. C., granted leave of absence for 2 months, to take effect about July 28, 1910.

Hewitt, John M., M. R. C., relieved from duty at the Presidio of San Francisco, and assigned to duty as surgeon of the transport *Buford*, with station at San Francisco.

Medical Corps, U. S. Navy

Changes during the week ended June 11, 1910:
Stibbens, F. H., P. A. surgeon, detached from the Naval Training
Station, Newport, R. I., and ordered to the Naval Training Station,
San Francisco.
Halton, E. P., acting asst.-surgeon, detached from the Naval
Hospital, Newport, R. I., and ordered to the Naval Training Station, Newport, R. I.
Stanley, A. C., asst.-surgeon, detached from the *Virginia* and
granted sick leave for 3 months.
Ryder, C. E., P. A. surgeon, detached from instruction at
Naval Medical School, Washington, D. C., and ordered to duty at
the Naval Hospital, Naval Home, Philadelphia.
Dunn, H. A., Seaman, W., Payne, J. H., Richardson, R. R., Stepp,
J., Stuart, A., P. A. surgeons, detached from instruction at the
Naval Medical School, Washington, D. C., and ordered to examination for promotion, on completion of which to wait orders.
Tolfree, H. M., P. A. surgeon, detached from instruction at the
Naval Medical School, Washington, D. C., and ordered to wait
orders.
Hightower, C. C., and Howard, J. V., acting asst.-surgeons, appointed acting assistant-surgeons from June 4, 1910.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF INOPERABLE CANCER

To the Editor:—Please give me any information regarding late developments in the use of methylene blue or the anilin derivatives in the treatment of inoperable cancer. I have a case of recurrent pelvic cancer in a patient aged 70, operated on two and a half years ago for cancer of the rectum. What is the dosage, and does combination with nutmeg prevent vesical irritation? Does the drug tend to inhibit pain and the development of the growth? What is the present opinion as to its efficacy? Would exposure to the *x*-ray have an inhibiting effect on the growth? A. B. S.

ANSWER.—An examination of the literature shows that not much has been written recently on the use of the anilin derivatives in inoperable carcinoma, so that the procedure, which had a certain vogue a number of years ago, has probably been largely abandoned. One of the most recent articles published in THE JOURNAL concerning the use of the methylene blue in cancer is that of Dr. A. Jacobi (THE JOURNAL, Nov. 10, 1906, p. 1545). In this paper Dr. Jacobi reports having used it in at least 120 cases extending over a period of fifteen years, with good results in the way of relieving pain, retarding or diminishing the growth and size of the neoplasm and prolonging life, in many cases for a number of years beyond the probable length of life without treatment. He gave the drug in small doses, beginning with 2 grains a day, running it gradually up to 3, 4 and 6 grains a day, combining it in pill form with belladonna, which he found more effective in preventing dysuria than nutmeg, giving three-fourths of a grain in the daily dose. He also frequently used 1/40 to 1/20 grain of arsenic trioxid and also 1/10 grain of strychnin in the daily dose. Patients should be told that the urine will be blue. In a discussion of Dr. Jacobi's paper, H. R. Slack reported using it hypodermically, 1 c.c. of a 2 per cent. solution every other day, with alleged beneficial results. References to the use of this and other anilin derivatives will be found below. The *x*-ray is still used to some extent in the treatment of superficial cancer and for the prevention of recurrence after operation in surface growths. It has an analgesic effect. It is found less effective in deep-seated growths such as the one referred to.

Einhorn, M.: "Methyl Blue in Malignant Inoperable Growths," *New York Med. Rec.*, 1891, xxxix, 358.

Meyer, W.: "Treatment of Inoperable Growths with Anilin Dyes," *New York Med. Jour.*, 1891, liii, 435; "Results Obtained Through the Use of Anilin Products in the Treatment of Carcinoma," *Ann. Surg.*, 1893, xviii, 522.

Slack, H. R.: "Blue Pyoktannin in the Treatment of Inoperable Malignant Growths," THE JOURNAL A. M. A., 1897, xxviii, 1227.

Jacobi, A.: "Methylthionin Hydrochlorid in Inoperable Cancer," THE JOURNAL A. M. A., Nov. 10, 1906, p. 1545.

THE UNCINARIA AND THYMOL TREATMENT

To the Editor:—1. Are hookworms visible to the naked eye? 2. Are the eggs visible to the naked eye? 3. What is the best method of administering thymol? C. W. BENSON, Bartlett, Tex.

ANSWER.—1. Hookworm comprises two species: *Ankylostoma duodenale* (the old-world species) and *Uncinaria americana* or *Necator americanus* (the new-world hookworm). *Ankylostoma duodenale* is described as follows: The length of the female is 8 to 18 mm. (⅓ to ⅔ inch); that of the male 8 to 12 mm. (⅓ to ½ inch). The head of the worm, which is curved backward, is *conical* and has a large bell-shaped mouth, surrounded by a horny capsule and possessing four hook-like teeth ventrally situated and two smaller vertical teeth on the dorsal side by which the worm fixes itself to the mucous membrane. The body is thread-like. The tail of the female ends in a point, but that of the male contains a three-fold bulbous swelling in which the intestine and vas deferens end. The hookworm is easily visible to the naked eye but a low power of the microscope is necessary to make out the details of the structure just described. *Uncinaria americana* has no hook-like teeth but has a dorsal pair of prominent semilunar plates or lips and a ventral pair of slightly developed lips of the same nature. The female varies less in length than that of *Ankylostoma duodenale*, being 9 to 11 mm. long.

2. The eggs are not visible to the naked eye but can be seen with the low power of the microscope. The eggs of *Ankylostoma duodenale* are about 0.05 mm. (1/500 inch) long and about half as broad and show segmentation in the shape of 2 or 3 furrows. The eggs of *Uncinaria americana* are somewhat larger—64 to 72 by 36 to 40 microns.

3. Thymol should be given in capsule, the crystals being first triturated with sugar of milk to prevent agglomeration, or in emulsion with acacia in 30-grain doses repeated in two hours for an adult. In administering thymol, it is essential that none of the solvents of the drug should be given either with it or immediately after. The solvents include alcohol or alcoholic drinks, ether, chloroform, glycerin and oils. In order to prevent poisoning by thymol it should be followed by a saline purge, and castor oil should not be used. For further details see THE JOURNAL, Oct. 16, 1909, p. 1307; also article by E. E. Lindeman in THE JOURNAL, May 28, 1910, p. 1765. In the search for uncinaria, if the microscope is not at hand, it is recommended by Stiles to give a small dose of thymol, followed by Rochelle salt, and to collect all the stools passed: to wash the stools several times in a bucket and to examine the sediment for worms about half an inch long, about as thick as a hairpin or hatpin and with one end curved back to form a hook.

EFFECT OF CHOCOLATE ON THE URINARY ORGANS

To the Editor:—Please give information concerning the following questions: 1. What is the explanation of irritation of the urinary organs and passages following the ingestion of chocolate and chocolate candies, usually in large amounts? 2. On what substances in the chocolate, or chemical changes induced in the digestion do the irritating qualities depend? 3. Kindly give a chemical analysis of ordinary chocolate. X. Y. Z.

ANSWER.—1. We are unable to find any statement that irritation of the urinary organs is a common result of the ingestion of chocolate or chocolate candies. If this symptom has been observed, it appears not to have been made the subject of pharmacologic investigation.

2. The principal constituents of the cacao bean are fat (oleum theobromatis), theobromin, other nitrogenous substances, volatile oil, tannin and cocoa red, and gum. The fat is a non-irritating, easily digestible substance having a composition similar to other fats, with the exception that it contains a glycerid of arachidic acid. It is improbable that irritation could be produced by the fat unless indirectly by disturbing digestion in susceptible people. Theobromin (dimethylxanthin) is a base similar to caffein (trimethylxanthin) and acts as a powerful diuretic. It is converted to a large extent into purin compounds and may possibly increase the amount of uric acid in the urine. The other nitrogenous substances are mostly insoluble and indigestible and have no constitutional effect. Nothing appears to be known about the action of the tannin and cocoa red or the gum. It is supposed that the aroma of cocoa depends on a volatile oil, but nothing is known regarding its pharmacologic action so far as we can learn.

3. Ordinary chocolate consists of the roasted and ground cacao beans, from which a portion of the fat has been removed and the residue pressed into cakes, either with or without the addition of sugar. In consequence of the varying methods of manufacture, it is not practicable to give an exact analysis of ordinary chocolate. The following is an analysis of the Caracas cocoa nibs: Moisture, 7.77; nitrogenous substances, including theobromin, 14.13; theobromin, 1.48; fat, 45.54; starch, 19.40; cellulose, 6.19; ash, 4.91; sand, 2.06 (Weighman).

Marriages

BERT L. WARE, M.D., Fort Smith, Ark., to Miss Bessie Chandler, of Greenwood, Ark., June 5.

GEORGE S. FULTZ, M.D., Broadway, Va., to Miss Alma K. McDowell, at Broadway, June 8.

HOMER B. CATRON, M.D., Hanaford, Ill., to Miss Edna Earle Price, of Belle Rive, Ill., June 1.

DONALD CHURCH BALFOUR, M.D., to Miss Carrie Louise Mayo, both of Rochester, Minn., May 28.

BERNARD J. LACHNER, M.D., Rock Island, Ill., to Miss Anna Elizabeth Kelley, of Philadelphia, June 1.

CHARLES E. HOWARD, M.D., Cogswell, N. D., to Miss Florence E. Latourell, of Mankato, Minn., recently.

JOHN ROBERTS CAULK, M.D., Easton, Md., to Miss Bessie Jenifer Harrison, at Towson, Md., June 1.

JOHN P. FLETCHER, M.D., U. S. Army, to Miss Jeannette Mattfeldt, at Mount Washington, Md., June 1.

ROYDEN WINTHROP DAVISON, M.D., Trenton, N. J., to Miss Inez May Gruber, of New Haven, Conn., June 1.

JOHN JAMES KENNEDY, M.D., Mill Creek, W. Va., to Miss Mary Louise Miller, at Cumberland, Md., June 1.

ROBINETTE BURNS HAYES, M.D., Fayetteville, N. C., to Miss Minnie Bond Anderson, at Baltimore, June 1.

LOUIS WARDLAW HASKELL, JR., M.D., Memphis, Tenn., to Miss Robin Hamilton, at Mount Sterling, Ky., June 1.

HERMAN A. BECK, M.D., Lebanon, Ind., to Miss Nellie Goodnight, of Kempton, Ind., near Elizaville, Ind., recently.

Deaths

Henry Granger Piffard, M.D. College of Physicians and Surgeons, New York City, 1864; a member of the American Medical Association, New York Academy of Medicine and American Dermatological Association; who served in 1862 with the United States Sanitary Commission, and in 1867 and 1868 as the surgeon of the Seventh Regiment N. G. S. N. Y.; president of the New York Dermatological Society in 1876; since 1869, surgeon to the New York Dispensary for Diseases of the Skin; and since 1871, surgeon to the Charity Hospital; in 1873 and 1874, lecturer on urinary analysis in the University of the State of New York, and since 1874, professor and emeritus professor of dermatology in that institution; consulting surgeon to the City Hospital; author of several standard books on diseases of the skin and genitourinary system; died at his home in New York City, June 8, from pneumonia, aged 67.

Simon Leopold Elsner, M.D. College of Physicians and Surgeons, New York City, 1887; a member of the American Medical Association; examiner for the National Jewish Hospital for Consumptives, Denver; formerly chairman of the gynecological section of the Rochester (N. Y.) Academy of Medicine; assistant physician to the Rochester City Hospital; died suddenly in Rochester, June 5, from angina pectoris, aged 43.

Samuel L. Dutton, M.D. Harvard Medical School, Boston, 1860; a member of the Massachusetts Medical Society; assistant surgeon of the First Massachusetts Volunteer Heavy Artillery and later surgeon of the Fortieth Massachusetts Volunteer Infantry, and surgeon-in-chief of the Third Brigade First Division Eighteenth Army Corps during the Civil War; for many years pension examining surgeon for Boston and vicinity; died at his home in Chelmsford, May 27, aged 74.

Oscar Fordyce, M.D. College of Physicians and Surgeons, Chicago, 1885; a member of the American Medical Association; president of the Guthrie County (Iowa) Medical Society, and a member of the Iowa State Association of Railway Surgeons; local surgeon for the Rock Island System at Guthrie Center, and commissioner of insanity for Guthrie county; chief surgeon of the Fordyce Hospital; was instantly killed in an automobile accident, near Guthrie Center, June 5, aged 49.

John Stewart Kulp, M.D. University of Pennsylvania, Philadelphia, 1889; who entered the United States Army as assistant surgeon in 1893, was made captain and assistant surgeon in 1898, major in the medical corps in 1906, and was retired, Dec. 4, 1908, on account of disability in line of duty and moved to Seattle and was appointed surgeon of the National Guard of Washington in 1909; died in a hospital in Seattle, June 3, aged 44.

William C. Chapman, M.D. Miami Medical College, Cincinnati, 1873; a member of the American Medical Association; for several years president of the Toledo Federation of Charities; a member of the medical staff of St. Vincent Hospital, and for several terms a member of the board of health of Toledo; died at his home, May 29, from nephritis, aged 69.

Camillus Bush, M.D. Johns Hopkins University, Baltimore, 1902; of San Francisco; a member of the American Medical Association; assistant in surgery in the University of California, and visiting surgeon to St. Helena Sanitarium; died in the Adler Sanatorium, Woodland, Cal., May 28, from typhoid fever, aged 32.

Henry S. Wishart, M.D. University of Pennsylvania, Philadelphia, 1864; a veteran of the Civil War, and representative from Fulton county in the legislature in 1875 and 1876; for many years a practitioner of McConnellsburg, Pa.; died at the home of his daughter in Johnstown, June 2, from cerebral hemorrhage, aged 78.

John Edward Groves, M.D. Bennett Medical College, Chicago, 1887; a member of the *Effingham County* (Ill.) Pension Board; died at his home in Altamount, May 17, from perforation of the bowels and stomach, due to an abscess of the gall-bladder, for which two operations had been performed, aged 45.

Henry Napoleon Austin, M.D. College of Physicians and Surgeons, New York City, 1865; for many years a practitioner of south Arkansas, near Pine Bluff, and one of the founders of the Austin Company at Dumas, died in Asheville, N. C., April 20, from carcinoma of the neck, aged 72.

George K. Meschter, M.D. University of Pennsylvania, Philadelphia, 1867; vice-president of the Perkiomen Seminary, Pennsburg; a leader of the Schwenkenfelder Church; died at his home in Centre Point, Worcester, Pa., June 4, from cerebral hemorrhage, aged 70.

Stiles Kennedy, M.D., University of Pennsylvania, Philadelphia, 1858; a member of the Michigan State Medical Society; and for more than half a century a practitioner of St. Louis, Mich.; died at his home, May 27, from cerebral hemorrhage, aged 72.

Murray Sims Hitchcock, M.D. Louisville Medical College, 1893; a member of the American Medical Association; formerly surgeon for the Alabama Consolidated Coal and Iron Company at Brookwood, Ala.; died at his home in Birmingham, May 27, aged 43.

Edwin H. Knowles, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1879; a veteran of the Civil War; member of the board of health of North Stonington; in 1889 a member of the state senate; died at his home, May 30, from nephritis, aged 67.

William H. Gray (license, examination, Ind.); of Michigan City; a veteran of the Civil War; who was adjudged insane, May 18, and committed to the Northern Indiana Hospital for Insane, Logansport; died in that institution, June 2, aged 71.

Rio Delos Barber, M.D. Harvard Medical School, Boston, 1866; a veteran of the Civil War, and for twenty years a practitioner of Corona, Cal.; died at his home in that place, May 26, from heart disease, aged 71.

Frederick Selnow, M.D. University of Goettingen, Germany, 1862; for more than 40 years a practitioner of Hudson county, N. J.; died at his home in lower Jersey City, May 20, from myocarditis and nephritis, aged 75.

Thomas W. E. Winders, M.D. Fort Worth (Texas) University, 1906; a member of the Tombstone Medical Society; died at his home in Tombstone, Ariz., Aug. 7, 1909, from peripheral neuritis, aged 24.

Reuben K. Dawson, M.D. University of Nashville, 1858; for many years a practitioner and clergyman of Maury county, Tenn.; died at his home in Knob Creek, June 3, from heart disease, aged 78.

William Krause, M.D. Jefferson Medical College, 1884; for a long time a sufferer from an incurable disease; died at his home in Philadelphia, June 3, from asphyxiation by illuminating gas, aged 63.

Beverly Allen Henry, M.D. Jefferson Medical College, 1852; a practitioner of Elberton, Ga., for many years; died at his home, "Henry Place," Elberton, April 12, from senile debility, aged 81.

William H. Dunn, M.D. Medical College of Ohio, Cincinnati, 1874; of Gaston, Ind.; a member of the Delaware County Medical Society; died in Indianapolis, May 30, from heart disease, aged 63.

James T. Prevatt, M.D. George Washington University, Washington, D. C., 1905; a member of the Medical Association of Georgia; died at his home in Monticello, May 27, aged 38.

George Almarian Dean, M.D. Hahnemann Medical College, Chicago, 1878; for 25 years a practitioner of Kansas City; died at his home, June 1, from cerebral hemorrhage, aged 64.

Hugh C. Calloway, M.D. Beaumont Hospital Medical College, St. Louis, 1890; a member of the Wyoming State Medical Society; died at his home in Lander, May 23.

George Waldron Bartlett, M.D. New York Homeopathic Medical College, 1895; died at his home in Bath Beach, Brooklyn, N. Y., June 5, from heart disease, aged 57.

Alfred R. Ligon, M.D. Southwestern University Medical College, Dallas, 1904; died at his home in Henderson Cross Roads, Tenn., May 31, from pellagra.

Silas Warrick Hall, M.D. Starling Medical College, Columbus, Ohio, 1849; died at his home in Weston, W. Va., May 18, from malignant disease, aged 85.

Charles Rowley Enos, M.D. Homeopathic Medical College, St. Louis, 1874; died at his home in Jerseyville, Ill., May 12, from senile pneumonia, aged 95.

John Thomas Richter, M.D. Kentucky University, Louisville, 1904; of Louisville; was struck by a street car, June 1, and instantly killed, aged 30.

R. T. Long (license, Tenn., 1889); for many years a practitioner of Columbia, Tenn.; died at his home, May 29, from cardiac asthma, aged 70.

Thomas F. Joyce, M.D. New York Homeopathic Medical College, New York City, 1859; died at his home in Brooklyn, Dec. 16, 1909, aged 71.

W. A. Boyd, M.D. University of Louisville, 1853; died at the home of his daughter in Mayfield, Ky., May 31, from cerebral hemorrhage, aged 78.

PROCEEDINGS OF THE ST. LOUIS SESSION

MINUTES OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. LOUIS, MO., JUNE 6-10, 1910

Third Meeting — Tuesday Afternoon, June 7

The House of Delegates met at 2 p. m., and was called to order by President Welch. The Secretary called the roll.

Dr. H. Bert Ellis, Chairman, presented a supplementary report of the Committee on Credentials.

The minutes of the previous meeting were approved.

Report of Committee on Scientific Exhibit

Dr. Frank B. Wynn, Indiana, Director, read the report of the Committee on Scientific Exhibit, as follows:

To the Members of the House of Delegates:

The Scientific Exhibit of the St. Louis session will compare favorably with previous exhibitions, especially in the variety of material presented. It has been the policy of the committee from year to year to seek to widen the range of instructive exhibits beyond the museum type, so as to include all forms of medical activity. The present exhibit shows an encouraging response in this direction. It will give emphasis and illumination to the following subjects:

1. The clinical application of research work.
2. The practical value of thorough scientific work, whether in the laboratory or the hospital.
3. The methods of newer medical teaching.
4. The progress of clinical work in hospitals and dispensaries.
5. Newer methods in dealing with the tuberculosis and other sanitary and hygienic problems.
6. The rôle of parks and playgrounds in conserving the public health and comfort.
7. The advantages of competent food and dairy inspection.
8. The desirability of local medical societies giving more attention to medical history.

A booklet issued at the time of registration gives details as to institutions and exhibitors. Thirty-three institutions are represented in the Exhibit, and no less than fifty members of the Association have aided in its preparation or presentation. The local profession have abundantly atoned for any past delinquency in participation by a most generous patronage of the present Exhibit under the efficient direction of Dr. F. J. Lutz.

When it is recalled that the labor of preparing this Exhibit is largely gratuitous, the services of the men become an eloquent testimonial to their unselfish devotion to the higher ideals of medicine. Theirs is a labor of love, and their reward the consciousness of service to others, which, after all, is the true foundation of happiness.

Following the plan of a year ago, certificates of honor will be given to a limited number of exhibitors. Gold medals will be awarded (a) for the best research exhibit relating to some phase of pathology or internal medicine, and (b) for the best research exhibit bearing on clinical surgery. A committee on awards (of three members) should be appointed by the President at once.

It is recommended that $500 be appropriated to meet the ordinary expenses for the ensuing year, and $300 for medals, certificates of honor and small cash grants to encourage exhibitors who have made heavy personal outlay, especially in investigation work.

The Scientific Exhibit has abundantly proved its usefulness. The benefits are to be reckoned not merely by the practical lessons taught the visiting members of the Association at each annual session. An educating influence still more potent has been stimulated, through the friendly rivalry of institutions which have participated. The practical effect has been the growth of museums in colleges and hospitals, and the advancement of the standards in medical teaching. Traceable, likewise, to the Association's efforts are the exhibits now generally in vogue for the education of the public on the various sanitary and hygienic problems.

What is to be the future of the Scientific Exhibit? Have the limits of its usefulness been attained? Must we continue in the path now well beaten, or are there other fields to explore and develop?

In answering these questions it may be well to call attention to a rapidly growing sentiment in the Association that the organization should take a hand in a large way in spreading knowledge among the people concerning the problems of hygiene, sanitary science and all matters relating to the public health and comfort. While the campaign under the efficient direction of Dr. McCormack had for its primary object medical organization, he sought to blaze the way for judicious medical instruction of the public. This same sentiment was voiced at the last session of the House of Delegates by the passage of a resolution calling on county medical societies to devote at least one annual meeting to a publicity program.

There are so many ways in which well organized and well directed medical effort would aid the public weal that the question may well be asked: *What is the Best Thing to Do?*

Objection is raised against the Association entering on a campaign of publicity, because it is claimed that the field is already occupied by the American Public Health Association, the National Association for the Study and Prevention of Tuberculosis, Boards of Public Health, etc. The same reasoning would have prevented the Association from elevating the standard of medical education or attempting the eradication of the proprietary medicine evil.

Again, it is asserted that health boards would resent activity of the Association in this field as an intrusion. On the contrary, it is just such national, cooperative support from nonpolitical sources that health boards everywhere feel the need of. On every hand they are hampered in the prosecution of public health work; at one time by a suspicious and uneducated public sentiment; at another time by narrow-minded and pernicious public officials, more concerned in guarding the interest of corn, hogs and corporations than in the protection of the people's health; or, more frequently still, public health officials are held fast in the mire of politics.

No one will contend that the Association should undertake the details of police surveillance in public health matters. Its functions should be educational and advisory. It is entirely practicable for the organization to inaugurate and exert a powerful moral and educational force throughout the country which will prepare the soil for the growth of public health work. It should seek in every way possible to divorce this type of public service from politics. It may furthermore undertake very properly the standardization of public health methods.

Many health boards, state and local, well officered and with ample funds, are doing magnificent work. Many others, because of local conditions, inadequate financial aid or bungling methods, are bringing discredit on preventive medicine in the public mind.

Granting that the Association should undertake a campaign of publicity: *What Is the Best Method to Pursue?*

Public lectures, accompanied by stereopticon views and exhibits, constitute the most popular method at the present time. Forensic presentations, when well conducted, are most valuable and should be continued and extended. Such efforts, however, are apt to be spasmodic—occurring at long intervals. Towns, villages and the rural districts do not enjoy their benefits. There is wanting, also, that continuity of educational effort which counts.

Forensic presentations are open to the further objection that they may not be judiciously conducted. Through inexperience or lack of adaptation to the work, bungling may result. Recently, in a college town, a course of talks to students on sexual hygiene and the social evil was presented with so little judgment and tact that it brought the ridicule and condemnation of the student body, causing abandonment of the movement by faculty action. Another, and not a small objection to local forensic presentations on public health matters, is that many people look on them as a scheme of doctors for personal ends; and the prominence of a few medical men in the work often arouses jealousy and unworthy criticism from rival members of the profession.

The practical utility of the public health exhibit as a means of instructing people has been abundantly demonstrated. The information they receive in this manner is more likely to be carefully weighed. The knowledge people gain through the eye from pictures, charts, models, etc., makes more lasting impression than the spoken word. The impersonality of the exhibit is another factor to commend it. Local jealousies and criticisms are not so apt to be aroused.

Your Committee on Scientific Exhibit has for several years given careful study to the matter of public health exhibits as ordinarily conducted. They are generally heterogenous and wanting in systematic arrangement. Often the data they contain are unwarrantably sensational, terrifying or misleading to the public. They are cumbersome in size. Their initial cost is great, and their maintenance and presentation necessitate a large expenditure. They are only practicable, therefore, for the health boards of states and large cities. Only at long intervals are they available for county seats. Villages and the country districts do not receive their benefits. These exhibits are of the traveling kind; their effect, like that of the traveling revivalist, may once in a long period stir up a little hygienic or sanitary fervor, but in a short time after the "big meeting" is over the people become backsliders. Let us make hygienic and sanitary reform a religion of daily life.

Your committee is under the conviction that the exhibit offers the most practical means of bringing this to pass. It lies within the power of this Association to develop cheap, compact, and yet complete exhibits relating to all the problems of the public health and comfort. It would be possible in this way to standardize to a large extent public health methods throughout the country. The wise and judicious hand of the Association would guard against erraticism in the field of preventive medicine, and seek on every hand to cooperate with and aid existing forces working for the public health and comfort.

Your committee is impressed with the feasibility of such a publicity campaign by means of exhibits. We would therefore ask for the appointment of a representative special committee to meet in conference with the Committee on Scientific Exhibit for more detailed consideration of the plan, to be reported back to this body.

Respectfully submitted,
FRANK B. WYNN, Director.

The President stated that unless there was objection, the report of the Committee on Scientific Exhibit would be referred to the Board of Trustees, and as there was none the report was so referred.

Report of the Committee on Scientific Research

In the absence of Dr. Alfred Stengel, Pennsylvania, Chairman, the General Secretary read the report, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your Committee on Scientific Research would report that it has made for the current year three grants which become effective, the amount being $200 for each grant.

The first of these is to Dr. R. M. Pearce, of New York, for the following pieces of work which will be presented at the meeting of this year:

1. Homer F. Swift. The effect of Treatment on the Wassermann Reaction.
2. Thomas MacRae, A. B. Eisenbrey, and Homer F. Swift. The Use of Pure Lipoids and Alcoholic Extracts with Active and Inactive Serum in the Complement Fixation Tests for Syphilis.
3. Homer F. Swift and William C. Thro. A Study for Streptococci with the Complement Fixation and Coglutination Reactions.

These three studies were made in the laboratory of Dr. Pearce and under his direction.

The second grant is to Dr. Gerald B. Webb, of Colorado Springs, for a report on "Production of Immunity by Inoculation of Living Bacteria."

The third to Dr. E. C. Rosenow on "Studies on the Pneumococcus."

Several other applications were made and grants would have been made but for delay or failure of applicants to complete their work.

The Committee has exercised a great deal of discretion in making grants, and requests that the amount allowed at last year's meeting be not reduced, as the pending applications which have not become effective this year will be repeated for the following year.

ALFRED STENGEL, Chairman.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was referred to the Board of Trustees.

Report of Committee on Organization of Council on Public Health, Publicity and Legislation

In the absence of Dr. Charles A. L. Reed, Ohio, Chairman, the General Secretary read the report, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your committee presents the following amendments to the constitution and by-laws:

Amend Section 3 and Chapter 10, page 19 of the by-laws, to read as follows:

(a) Judicial Council.
(b) Committee on Transportation and Place of Session.
(c) Council on Medical Education.
(d) Council on Legislation, Health and Publicity.

Strike out Sections 5 and 8 of Chapter 10 and substitute for Section 5 the following:

There shall be a Council on Legislation, Health and Publicity to consist of five members, to be elected by the House of Delegates, on nomination by the President. Those first appointed shall serve one for one year, one for two years, one for three years, one for four years and one for five years. The respective terms of service shall be determined by lot and thereafter one member shall be elected annually, on nomination by the President. The President shall have power to fill by appointment all vacancies arising from any cause during intervals. The Council shall organize and shall elect a Chairman from its number. The Board of Trustees shall appoint a Secretary on nomination by the Council, and shall fix his salary.

The Council shall adopt such rules and regulations for the government of its actions as it may deem expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees.

The work of the Council shall embrace the following subjects:
(a) Legislation.
(b) Organization.
(c) Publicity.
(d) Defense of Medical Research.
(e) Health.

It may appoint committees to carry on the respective purposes of the Council.

It shall make an annual report of its work to the House of Delegates.

The office of the Council shall be at the headquarters of the Association.

Respectfully submitted,
CHARLES A. L. REED, Chairman.

On motion, the amendments were referred to the Reference Committee on Constitution and By-Laws.

Report of Reference Committee on Sections and Section Work

The report was read by the Chairman, Dr. John E. Weeks, as follows:

To the Members of the House of Delegates of the American Medical Association:

At a meeting of the Reference Committee on Sections and Section Work, at which all of the members were present, proposals to establish a "Section on Urology and Venereal Diseases," a "Section on Physical Forces in Medicine" and a "Section on Hospitals," referred to this committee by your body, were considered. Arguments in favor of these proposals were listened to and the data submitted. It was unanimously agreed to submit the following recommendations:

GENITO-URINARY SECTION FORMED

1. That a section entitled "Section on Genito-Urinary Diseases" be authorized and established at this session. It is further recommended that the following named gentlemen be appointed officers of this section to serve during the first year of its activities, and that these officers be empowered to appoint an Executive Committee of three—one member to serve one year, one to serve two years, and one to serve three years, the subsequent election of officers and the constitution of the Executive Committee being provided for in the By-Laws of this Association.

Officers: Dr. W. T. Belfield, Chicago, Chairman; Dr. James Pederson, New York, Vice-Chairman; Dr. Hugh Young, Baltimore, Secretary.

2. In regard to the proposal to establish a section to be known as the "Section on Physical Forces in Medicine," your committee is unanimously of the opinion that the time is not yet opportune for the establishment of such a section.

3. In regard to the proposal to establish a section to be known as the "Section on Hospitals," your committee finds

that the subject is not yet sufficiently advanced to make it evident that there is sufficient demand for the creation of such a section. Your committee, therefore, respectfully recommends that this proposal be referred back to the proposers for subsequent presentation if they so desire, when, in their opinion, sufficient support has been obtained to warrant favorable action by the committee to which it may be referred.

John E. Weeks, Chairman.
E. C. Hay, Secretary.
C. J. Smith.
Alfred D. Sawyer.
Orland J. Brown.

It was moved and seconded that the report be adopted. Carried.

Report of the Reference Committee on Medical Education

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Medical Education, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your committee believes that we are, at the present moment, at a very important stage in the efforts of the American Medical Association to benefit the community by raising the standards of medical education. For this reason the Committee has given the report of the Council on Medical Education careful and critical study.

We wish to congratulate the Council on the excellent work it has done, and on the great progress in medical education since it began its work, six years ago. This is shown not only in the raising of standards of admission, but in the more systematic and better arrangement of the curriculum, and in improvement in the personnel and methods of teaching, which now approach more nearly to university standards.

When the Council began this work there were 168 medical schools in the United States. Some of the poorest schools have been forced to discontinue. A number have disappeared through the amalgamation of schools, thus making stronger and better schools. The number has now been reduced to 133.

Much of this improvement is due to the methods by which the work of the Council is carried out. With a paid Secretary, devoting his whole time to this work, the Council has been able to establish a bureau of statistics and information on medical education, which is invaluable in the study of these problems.

Furthermore, it has been enabled to undertake a work that was much needed, yet for which there seemed to be no established official agency—namely, the investigation of the actual standing and condition of the various medical schools of the country. This investigation has covered several years. We believe it has been done conscientiously and with thoroughness. The standing of all schools has been made on a uniform basis of marking that is broad and fair. Whatever questions there might be as to the absolute value of the rating given a school, there can be no question that the rating fairly expresses the relative standing of the schools.

After investigation, the Reference Committee is impressed by the leniency with which these ratings have been made. Consequently, we would urge the schools in Class A (rated over 70 per cent.) not to feel that they have reached perfection because they are designated "first class." Class A contains 70 schools.

The schools in Class B were rated at 50 to 70 per cent. They are unsatisfactory, in certain particulars, but capable of improvement to a satisfactory basis. To all these schools information has been sent, showing in what lines improvement should take place. There are 29 schools in this class.

Class C comprises the schools falling below a rating of 50 per cent. Some of these schools are regarded as hopeless; others can be made satisfactory only by a thorough reorganization along more advanced lines. The Council will gladly furnish information to these schools as to their short-comings, if they desire it. Twenty-seven schools belong to Class C.

The schools for colored students have been classified on a still more lenient basis. This is justified, not on the ground of any racial difference, but on account of peculiar educational conditions.

TO PUBLISH RATINGS OF SCHOOLS

The Council believes that the time has come when the best interests of medical education demand that this rating of schools should be made public. In this opinion the Reference Committee concurs. It seems to be a disagreeable but necessary duty.

We would, therefore, recommend that the House of Delegates authorize the publication of the rating of the schools. We believe that the Association should assume this responsibility.

We would recommend, secondly, that the Council be requested to continue its investigations along these lines in some conservative way. We shall thus secure a healthy advance on the part of the worthy schools, yet shall not aim at impossible results.

Thirdly, we would recommend that the Council be encouraged to continue its plans for securing the cooperation of all organizations which are interested in the improvement of medical education, but we would have them continue to recognize that the American Medical Association should establish its own standards, and that these standards can be only such as the present status of education in the United States warrants.

FOR UNIFORM PRACTICE ACTS

Fourthly, we believe that the House of Delegates should urge the Council to further efforts in the direction of securing more uniform state regulation of the practice of medicine, and in securing reciprocity between states.

Finally, we would endorse a plan that the Council mentioned to your Committee for the establishment of a registry of medical students. Such a plan has been carried out by the General Medical Council of Great Britain, and it should be of great benefit. As it would involve further expense, your Committee recommends that the House of Delegates approve this plan and refer it to the Trustees for action.

Respectfully submitted,
H. D. Arnold, Massachusetts.
T. D. Tuttle, Montana.
J. A. Capps, Illinois.
James B. Bullitt, Mississippi.
Hubert Work, Colorado, Chairman.

As a supplement to its report, the Committee presented the following classification of medical colleges, furnished by the Council on Medical Education:

CLASS A.—ACCEPTABLE MEDICAL COLLEGES

1. Giving a complete four-year course:

Alabama
  University of Alabama Medical Department.
California
  Leland Standford Junior University Medical Department (Cooper Medical College).
  University of California, Medical Department, San Francisco-Los Angeles.
Colorado
  Denver and Gross College of Medicine.*
  University of Colorado, School of Medicine.*
Connecticut
  Yale Medical School.
District of Columbia
  George Washington University, Department of Medicine.
  Georgetown University, School of Medicine.
Illinois
  Northwestern University Medical School.
  Rush Medical College [illegible]go.
  College of Physicians [illegible]ago.
  Hahnemann Medical [illegible], Chicago.
Indiana
  Indiana University School of Medicine.
Iowa
  State University of Iowa, College of Medicine.
  State University of Iowa, Homeopathic College.
  Drake University, College of Medicine.
Kansas
  University of Kansas, School of Medicine.
Kentucky
  University of Louisville, Medical Department.
Louisiana
  Tulane University of Louisiana, Medical Department.
Maine
  Medical School of Maine.
Maryland
  Johns Hopkins University, Medical Department.
  University of Maryland, School of Medicine.
  College of Physicians and Surgeons, Baltimore.
  Baltimore Medical College.
Massachusetts
  Boston University, School of Medicine.
  Harvard Medical School.
  Tufts College Medical School.
Michigan
  University of Michigan, Department of Medicine and Surgery.
  University of Michigan, Homeopathic College.
  Detroit College of Medicine.
Minnesota
  University of Minnesota, College of Medicine and Surgery.

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* These two colleges have been merged and will constitute the School of Medicine of the University of Colorado.

Missouri
St. Louis University, School of Medicine.
Washington University, Medical Department.
University Medical College, Kansas City.
Nebraska
Creighton Medical College.
University of Nebraska, College of Medicine.
New Hampshire
Dartmouth Medical School.
New York
Albany Medical College.
Columbia University, College of Physicians and Surgeons.
Cornell University Medical College.
Fordham University, School of Medicine.
Long Island College Hospital.
New York Homeopathic Medical College and Hospital.
Syracuse University, Medical Department.
University and Bellevue Hospital Medical College.
University of Buffalo, Medical Department.
Ohio
Ohio-Miami Medical College, Medical Department, University of Cincinnati.
Starling-Ohio Medical College.
Western Reserve University, Medical Department.
Oregon
University of Oregon, Medical Department.
Pennsylvania
Hahnemann Medical College and Hospital, Philadelphia.
Jefferson Medical College.
Medico-Chirurgical College of Philadelphia.
University of Pennsylvania, Medical Department.
Woman's Medical College of Pennsylvania.
University of Pittsburg, Medical Department.
Tennessee
Vanderbilt University, Medical Department.
Texas
University of Texas, Medical Department.
Vermont
University of Vermont, College of Medicine.
Virginia
Medical College of Virginia.
University College of Medicine.
University of Virginia, Department of Medicine.

2. *Giving a two-year course acceptably:*

Mississippi
University of Mississippi, Medical Department.
Missouri
University of Missouri, Medical Department.
North Carolina
University of North Carolina College of Medicine.
Wake Forest College, Medical School.
North Dakota
University of North Dakota, College of Medicine.
Oklahoma
University of Oklahoma, School of Medicine.
South Dakota
University of South Dakota, College of Medicine.
Utah
University of Utah, Department of Medicine.
West Virginia
West Virginia University, Department of Medicine.
Wisconsin
University of Wisconsin, College of Medicine.

CLASS B.—MEDICAL COLLEGES NEEDING CERTAIN IMPROVEMENTS TO MAKE THEM ACCEPTABLE

Alabama
Birmingham Medical College.
Arkansas
College of Physicians and Surgeons, Little Rock.
University of Arkansas, Medical Department.
California
College of Physicians and Surgeons, Los Angeles.
Hahnemann Medical College of the Pacific.
Oakland College of Medicine and Surgery.
Georgia
Atlanta College of Physicians and Surgeons.
Atlanta School of Medicine.
Medical College of Georgia.
Illinois
American Medical Missionary College.
Chicago College of Medicine and Surgery (Valparaiso University).
Bennett Medical College.*
Kansas
Kansas Medical College.
Missouri
Barnes Medical College.
Kansas City Hahnemann Medical College.
New York
New York Medical College and Hospital for Women.
Ohio
Cleveland Homeopathic Medical College.
Eclectic Medical Institute.
Toledo University Medical Department.
Pennsylvania
Temple University Medical Department.
South Carolina
Medical College of South Carolina.
Tennessee
College of Physicians and Surgeons, Memphis.
University of Nashville.†
University of Tennessee.†
Memphis Hospital Medical College.
Texas
Baylor University, College of Medicine.
Fort Worth University, Medical Department.
Southwestern University Medical Department.
Wisconsin
Marquette University, Department of Medicine.
Wisconsin College of Physicians and Surgeons.

CLASS C.—MEDICAL COLLEGES WHICH WOULD REQUIRE A COMPLETE REORGANIZATION TO MAKE THEM ACCEPTABLE

California
California Medical College (Eclectic).
College of Physicians and Surgeons, San Francisco.
Georgia
Georgia College of Eclectic Medicine and Surgery.
Hospital Medical College (Eclectic).
Illinois
College of Medicine and Surgery, Physio-Medical.
Hering Medical College.
Jenner Medical College.
National Medical University.
Reliance Medical College.
Kentucky
Southwestern Homeopathic Medical College and Hospital.
Maryland
Atlantic Medical College.
Maryland Medical College.
Massachusetts
College of Physicians and Surgeons, Boston.
Michigan
Detroit Homeopathic College.
Mississippi
Mississippi Medical College.
Missouri
American Medical College.
Ensworth Medical College.
Hippocratean College of Medicine.
St. Louis College of Physicians and Surgeons.
Western Eclectic College of Medicine and Surgery.
Nebraska
Lincoln Medical College.
New York
Eclectic Medical College of the City of New York.
North Carolina
North Carolina Medical College.
Ohio
Pulte Medical College.
Oregon
Willamette University, Medical Department.
Tennessee
Chattanooga Medical College.
Tennessee Medical College.

MEDICAL SCHOOLS FOR THE COLORED RACE

Class A

Howard University, Medical Department, Washington, D. C.
Meharry Medical College, Nashville, Tenn.

Class B

Leonard Medical College, Raleigh, N. C.

Class C

Flint Medical College, New Orleans.
Knoxville Medical College, Knoxville, Tenn.
University of West Tennessee, Medical Department, Memphis, Tenn.
Louisville National Medical College, Louisville, Ky.

CANADIAN COLLEGES

Class A

Manitoba Medical College, Winnipeg.
McGill University, Medical Faculty, Montreal.
Queen's University, Medical Faculty, Kingston, Ontario.
University of Toronto, Medical Faculty, Toronto, Ontario.

Class B

Laval University Medical Faculty, Quebec.
Laval University Medical Faculty, Montreal.
Halifax Medical College, Medical Department of Dalhousie University, Halifax, N. S.

Class C

Western University Medical Department, London, Ontario.

On motion of Dr. Work, seconded by Dr. Chas. Jewett, New York, the report of the Reference Committee on Medical Education was adopted.

Committee on Awards Appoint

The President appointed as members of Award of Prizes and Medals in connection Exhibit, Drs. E. E. Southard, Boston; Hu and T. D. Coleman, Augusta, Ga.

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* This school has recently been united with the Illinois Medical College and, it is reported, will be developed as the Medical Department of Loyola University.

† These colleges have been merged and are known as the Medical Department of the Universities of Nashville and Tennessee.

The report of the Reference Committee on Amendments to the Constititution and By-Laws was called for. Dr. Alexander R. Craig, Pennsylvania, Chairman, stated that the Committee had been zealously at work, but at this time could only report progress, as the members had by no means completed the immense amount of work assigned to them.

Dr. George W. Guthrie, Pennsylvania, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Report of the Reference Committee on Reports of Officers

To the Members of the House of Delegates of the American Medical Association:

The Reference Committee on Reports of Officers begs leave to report as follows:

I. THE PRESIDENT'S ADDRESS

In compliance with the suggestion of the President, concerning vacancies occurring in the standing committees during the interim between the meetings of the House of Delegates, the Committee recommends that Section 1, Chapter X, of the By-Laws, be amended to read as follows:

CHAPTER X.—COMMITTEES

Section 1.—Classification of Committees.—Committees shall be classified as (a) Standing Committees, (b) Reference Committees, and (c) Special Committees. These committees shall be nominated by the president and elected by the House of Delegates, unless otherwise provided. Any of these committees, acting during the intervals between the sessions of the House of Delegates shall be subject to the Board of Trustees, and any vacancies occurring in any of said committees during the interval between the annual sessions of the Association shall be filled by the president.

II. THE REPORT OF THE GENERAL SECRETARY

The Committee concurs in the recommendation of the General Secretary,—that the Medical Association of the Isthmian Canal Zone be recognized as one of the component bodies of the American Medical Association, and recommends appropriate action by the House of Delegates.

The Committee but voices the unanimous sentiment of this body in expressing regret that the Secretary finds it necessary to ask the House of Delegates to relieve him of the responsibilities of the General Secretary. Dr. Simmons needs no assurance as to the temper and position of this body concerning him personally and officially. It always has stood, and stands to-day, a solid wall behind him, and has no words to express fully its high appreciation of his efficient and faithful services.

The Committee, however, feels that the request of Dr. Simmons should be respected, and, therefore, with great reluctance, recommends that it be granted in order that his great abilities may be exclusively devoted to the duties of Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,—the best medical journal in existence.

III. THE REPORT OF THE BOARD OF TRUSTEES

The Committee has no recommendation to make on this report, except as to the subject of the Public Health Education Committee. The Committee approves the action of the Board in refusing to recognize this Committee, as it had no legal status in the Association; but, in view of the fact that this Committee has been acting in good faith under a misapprehension as to its legal status, and as certain expenses have been incurred under such misapprehension, the Committee recommends that the House of Delegates authorize the Board of Trustees to meet such expenses as it may deem just to said Committee.

Respectfully submitted,
GEO. W. GUTHRIE.
W. B. RUSS.
C. R. P. FISHER.
D. S. FAIRCHILD.
VICTOR H. STICKNEY.

nclusion of the report, Dr. Guthrie moved its adop-
he exception of that part of it pertaining to an
o the By-Laws, and that this amendment be re-
Reference Committee on Amendments to the
d By-Laws. Seconded and carried.

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Committee concurs.
sary duty.

Report of Reference Committee on Miscellaneous Business

Dr. T. A. Woodruff, Chairman, presented the following report of the Reference Committee on Miscellaneous Business.

To the Members of the House of Delegates of the American Medical Association:

Your Reference Committee on Miscellaneous Business recommends that the report of the Committee on the United States Pharmacopeia be received and concurred in.

COMMITTEES CONTINUED ON PHARMACOPEIA, NOMENCLATURE AND ANESTHESIA

In view of the excellent work done by the Committee on Pharmacopeia, we recommend its continuance until the revision of the Pharmacopeia is completed.

Your Reference Committee on Miscellaneous Business would suggest that the report of the Committee on Nomenclature and Classification of Diseases be received. As there are no definite recommendations in this report, no further action is required. It is recommended that the Committee be continued.

Your Reference Committee on Miscellaneous Business recommends that the report of the Committee on Anesthesia be received and the committee continued. We suggest that the Board of Trustees give this committee definite instructions as to the scope and limitations of the investigation.

Respectfully submitted,
T. A. WOODRUFF.
EDWIN WALKER.
E. A. HINES.
E. J. GOODWIN.

On motion, the report was adopted.

Report of the Committee on Organization

To the Members of the House of Delegates of the American Medical Association:

Dr. J. N. McCormack, Kentucky, Chairman, read the report of the Committee on Organization, as follows.

Accounts of my itineraries in New England and the Northwest were given such publicity in Association and state journals at the time that I shall confine this report to the subject of national health legislation, which was put so prominently before the profession by the action of this House two years ago, and has been kept constantly before it by the indefatigable labors of your Legislative Committee since, in an effort to secure a national department of health, the aspiration and hope of this Association for half a century.

MOVEMENT FOR PUBLIC HEALTH LEGISLATION

After years of unselfish and apparently unappreciated effort it came to us unexpectedly that leading laymen all over the country, and the American Association for the Advancement of Science, had taken up the subject of public health legislation and were working on lines parallel to ours, and our forces were soon joined. This lay movement was led by a remarkable man, whom I came to appreciate first in the National Conservation Commission, and of his personality and labors it has become essential that you should know. Irving Fisher, a Jerseyman by birth, graduated from Yale some twenty years ago with higher honors than any other man, except one, had ever received from that institution. At once given one of the most important professorships, he soon developed tuberculosis, went West, and taught for several years in the universities of Colorado and California. An investigator, and student by nature, and vitally concerned in a personal way, he applied himself to the mastery of the laws of health, became a robust man and, fired by a noble zeal to save from, or cure others of, preventable afflictions similar to the one to which he had fallen a victim, he returned to Yale, changed to the field of political economy as best suited to the purposes he had in view, became one of the world's greatest students and writers in this field, organized the American Health League, became the leader of the lay forces, which started out with the avowed purpose of putting a knowledge of the laws of better and cleaner living, the benefactions of modern science, within reach of every hearthstone in this country, as his counterpart, Lord Ashley, had done in England a century before. I was impressed at the outset of our acquaintance that he had not seen the best side of our profession and had some of the prejudices, only more frankly expressed, of the average layman as to its aims and attainments; and asked him to make the same careful study of its plans of organizations and purposes that he had given to other problems, with the result that he soon became one of our most appreciated friends.

HEALTH PLANKS IN NATIONAL PLATFORMS

He joined Dr. Reed and others in securing the insertion of the health planks in the national platforms of the leading political parties, enlisted the active interest of President Roosevelt, leading educators, life insurance, labor, farmer and other great lay organizations, spending his time and means as freely and unselfishly to save others as if his own life or the life of his family were at stake.

FRIENDS IN CONGRESS

Soon another great layman, Senator Robert L. Owen, of Oklahoma, entered the lists as our official advocate in the national senate, largely through the influence of Major W. O. Owen, his brother, a retired medical army officer of ability, long interested in public health work, as have Sternberg, Gorgas, Reed, Carroll, Lazear, White, Blue, Carter, Gihon, in this and other branches of the public service. It has been one of the greatest privileges of my life to be intimately associated with these two lay friends of ours, Owen and Fisher, and knowing them and their unselfish purposes as I have come to do, I ask for them the gratitude and appreciation of the profession and people of this country, which is constantly in my own heart, that this be extended to Dr. Owen, for the important, if less conspicuous, work done by him.

Sent on to Washington by your Legislative Committee, after the great speech of Senator Owen had impressed this country as Gladstone had done England a few decades before, "that care for the public health is the first and highest duty of the statesman," I found many leading men of both houses outspoken in support of the principles of his bill, and a number of our most experienced friends believed that there was an excellent chance to perfect and pass it at the present session of the Congress. After looking over the ground and conferring with Doctors Sower, Wiley, Kober, Woodward, Owen and others (and I have never seen men more devoted and earnest in a cause), the hearings were arranged, and it is believed that few measures of such a nature were ever more ably supported.

OPPOSITION TO THE OWEN BILL

As the time for the hearing drew near an opposition developed, which was so vociferous and claimed so much as to deceive all but the most experienced men in and out of Congress.

Although the national government has no more authority over the practice of medicine outside of the District of Columbia, than the practice of law or farming, that this bill provided for the prevention and not for the cure of disease, and made no provision for putting doctors of any kind in authority over any body or thing, under the cry of medical freedom, the homeopathic, eclectic and practitioners of other schools were gravely informed that we were to be given absolute control of families and homes and that even religious liberty was at stake.

THE OPPOSITION IDENTIFIED

It soon became known that back of all this clamor were the "patent-medicine" people, food adulterators and other interests naturally at enmity with pure drugs, pure food and honesty and decency of method in all such matters, organized into an unholy, corrupt, but futile conspiracy to mislead the people and to break down the profession.

More important was an opposition due to a conflict of interest between the bureaus and divisions directly affected by the proposed transfer to the new health department, about which there might well be honest difference of opinion. This occasioned much anxiety to the friends of the legislation, and the ablest men in the profession came on to Washington and took part in the negotiations to meet the difficulty. These negotiations were continued here, and I am happy to inform you that, under the sagacious leadership of Doctors Welch and Gorgas, great enough to give proper consideration to every interest, an agreement has been reached, we are to have a health department, commensurate with the powers and resources of our government, and in time, our country is to be put in the front rank in the field of preventive medicine.

RESOLUTIONS PROPOSED

In accordance with that agreement, and by authority, I now offer the following:

Resolved, That the President be, and is hereby, authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for a national Department of Health, to be presented to the next session of Congress in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the cooperation and cooperate with other organizations having the same purpose in view.

Resolved, That the principles of the Owen bill, having for its object the creation of a national Department of Health, now pending in the Senate, and similar bills introduced in the House by Representatives Simmons, Creger and Hanna, be, and are hereby, heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Iriving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people—to the extent of hundreds of millions of dollars annually—and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of conspirators and who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

J. N. McCormack, Chairman.

The President stated that if there was no objection this report would be referred to the Reference Committee on Reports of Officers, and as there was none, the report was so referred.

Invitation from Texas

Under the head of new business the General Secretary read the following telegram from Amarillo, Texas: "The profession of the great Pan Handle joins all Texas in a hearty and cordial invitation to hold the next annual session of the American Medical Association within its borders, where ozone and good fellowship are as free as the howl of the festive coyote and password is stiffiene. E. A. Johnson, D. R. Fly, G. L. Thomas."

On motion, the telegram was referred to the Committee on Transportation and Place of Session.

Communication from W. C. T. U.

The General Secretary read a communication from the National Woman's Christian Temperance Union, which was referred, on motion, to the Reference Committee on Hygiene and Public Health.

Resolutions Regarding Coroners

Dr. E. J. Goodwin, Missouri, presented the following resolution, at the request of Dr. R. B. H. Gradwohl, St. Louis, regarding the need for change in the present coroners' system in the United States:

Whereas, The office of coroner, while ancient and honorable, exists to-day as an obsolete relic of what was formerly an office for the holding of property for the crown; and

Whereas, The original intent of holding property for the government has been changed by a slow system of evolution into an office for the determination of the cause of death and responsibility therefor of individuals dying by their own hand, by some one's else hand, by accident and without medical attendance; and

Whereas, The function of the coroner's office to-day is two-fold medical, in so far as determination of the cause of death is concerned, and judicial in so far as determination of the responsibility for this cause of death is concerned; and

Whereas, It is utterly impossible to reconcile these two functions under one heading; and

Whereas, On account of the weird jumble of functions, neither function is properly set out and served; and

Whereas, The functions have been divided, on this account, in some commonwealths, notably Massachusetts, by abolishment of the office of coroner, relegating the medical duties of that office to a medical examiner, and turning over the legal duties to the district attorney's office, resulting in a vast improvement over the older system, with credit to the medical profession, in view of the fact that the medical duties of the office are better performed under this system; therefore, be it

Resolved, That this House of Delegates go on record as favoring a system of investigation which will divorce the medical from the judicial functions of the coroner's office, and that the medical examiner system, such as in force in the commonwealth of Massachusetts, may well be imitated in seeking this new system.

On motion of Dr. Alexander R. Craig, Pennsylvania, the preambles and resolution were referred to the Reference Committee on Hygiene and Public Health.

Committee for Resolution on Dr. Ricketts

Dr. T. D. Tuttle, Montana, called attention to the death of Dr. H. T. Ricketts, who was a martyr to science. Montana had a small number of physicians who had done the best they could to honor Dr. Ricketts' name by establishing in their society a permanent Howard T. Ricketts' prize. He moved that the President appoint a committee of three to draft suitable resolutions in regard to Dr. Ricketts.

The motion was seconded.

Dr. G. B. Young, U. S. P. H. and M.-H. Service, pointed out that Dr. Ricketts was not the only physician who fell a martyr to zeal for scientific investigation in connection with typhus fever in Mexico, as he understood a physician from the State of Ohio had also died from that disease after his return to Ohio. This same physician of the U. S. P. H. and M.-H. Service had previously contracted yellow fever, dengue, smallpox, in Mexico, and this time typhus fever.

The motion was carried.

The President appointed as members of this Committee: Drs. T. D. Tuttle, Montana; Frank Billings, Illinois, and Alexander Lambert, New York.

On motion, the House of Delegates then adjourned until 3:30 p. m. Wednesday.

Fourth Meeting—Wednesday Afternoon, June 8

The House of Delegates met at 3:30 p. m. and was called to order by the President. The Secretary called the roll. The minutes of the previous meeting were read, corrected and approved.

Report of the Public Health Education Committee

A resolution was introduced, asking the privilege of the floor for Dr. Rosalie Slaughter Morton, to present the work of her committee. This was granted.

President Welch reminded the House that this committee was not regularly created by the Association and therefore not technically a committee of the Association or of the House of Delegates. He then introduced Dr. Morton, Chairman of the Committee, who presented the following report:

To the Members of the House of Delegates of the American Medical Association:

In presenting to you the work of the Public Health Education Committee, created in accordance with a resolution passed unanimously by you on June 10, 1909, and named according to the phraseology of the resolution, we wish you to know that we have realized the great responsibility resting on us to work worthily with you, who represent the vast number of American physicians who are leaders in scientific achievement and medical work for the good of humanity. We have felt it a privilege to do a piece of work which we hoped would be of some service to your many other active committees and fit like a piece of mosaic into the great constructive whole. We understood that we were commissioned to do this work because as members of many organizations we come in contact with large bodies of earnest, public-spirited women who realize the importance to their children of high community standards of health. We have given in the one year of our existence 2,250 lectures free from technicalities and filled with sound teaching regarding public health, and have reached 102,575 people.

TIME RIPE FOR THIS WORK

The timeliness of the action taken by the House of Delegates of the American Medical Association is emphasized by the fact that, as Dr. George W. Wagoner of Johnstown, Pa., said lately, in his presidential address before the Medical Society of the State of Pennsylvania: "Doctors are losing the confidence of and receiving criticism from the laity." This is largely due to the fact that throughout the country the public is being exploited by pseudo-scientists who affirm that we, the so-called "drug-doctors," are commercially interested in keeping the people ill, while they are working to prevent disease. The laity is much interested in public health education. The psychologic moment has come, and it would be a serious reflection on our profession if we did not now educate the public to a thorough appreciation of the position of the doctor as the protector of the health of the community. Instead of doing this individually or in isolated groups, through a national movement from within the American Medical Association, we emphasize the fact that this desire to educate the public for the prevention of disease is general among physicians. In presenting to you the work of this committee we ask your hearty cooperation as individuals and as members of the American Medical Association in this work of service to our country.

Another year the work would have wider usefulness, as in many organizations which have sought our cooperation, the general lecture programs for this year were completed before our committee work began. They, however, welcome the opportunity to have practical instruction on public health subjects another year and there are many requests in all parts of the states for a continuation of the work.

In the printed report, copies of which you received yesterday, you will find details of the work which is now well organized and going forward in forty states. You will see that a small leaflet has been used to set forth the object and plan of work, as follows:

THE CREATION OF THE COMMITTEE

This plan of work is the result of the following resolution unanimously passed by the House of Delegates of the American Medical Association at their annual meeting held in June, 1909, in Atlantic City, N. J.

> Whereas, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease; and
>
> Whereas, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore, be it
>
> *Resolved*, That the women physicians, members of the American Medical Association, be, and they are hereby, requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations and other similar bodies, for the dissemination of accurate information touching these subjects among the people, and that they be requested to submit to the House of Delegates a yearly report of such work, and to elect from among their number a committee to take charge of the same.

SUBJECTS DISCUSSED BEFORE THE PUBLIC

In accordance with this resolution, physicians from all over the United States held a meeting in New York City, July 20, 1909, when the Public Health Education Committee of the American Medical Association was formed and officers were elected. Many physicians, both men and women, who have already done a great deal of work individually along these lines have now promised, through this committee, to give gratuitously, from time to time, during the ensuing year, as they may be requested to do so by women's clubs, mothers' and teachers' organizations, young women's Christian associations, church and social settlement clubs, etc., addresses on the following subjects:

1. The cause and prevention of ordinary colds.
2. The value of pure food and the physiology of digestion.
3. The chemistry and economic value of food.
4. The care of the food at home.
5. The relation of pure water to the public health.
6. Water-borne diseases.
7. The value of exercise and rest to the public health.
8. The causes and prevention of nervous exhaustion and prostration.
9. The use and abuse of stimulants and narcotics.
10. The prevention and cure of tuberculosis.
11. The air we breathe and the value of ventilation.
12. The relation of flies, mosquitoes, water bugs and other insects to public health.
13. Pure milk and infant hygiene.
14. The hygienic management of nervous children.
15. The relation of teeth to good health.
16. Prevention of some of the commoner skin diseases.
17. The importance of early diagnosis and treatment of adenoids.
18. The causes and prevention of deafness.
19. The prevention of Fourth of July injuries and tetanus.
20. The prevention of acquired deformities.
21. The causes and prevention of blindness.
22. The causes and results of eyestrain.
23. How to instruct children regarding the origin of life.

24. The responsibility of girlhood to motherhood in the care of the health during the menstrual period.
25. Pregnancy and the menopause.
26. The value of early diagnosis of cancer in women.
27. The responsibility of boyhood to fatherhood.
28. Social hygiene—how parents may protect their sons and daughters from immorality.

COOPERATION WITH CLUBS

In order to simplify this work it is suggested that each club or organization wishing one or more of the above lectures on the prevention of disease, from a hygiene committee whose duty it shall be to arrange the date, choose the topic or topics and communicate with the Public Health Education Committee, who will on receiving such requests ascertain which of the physicians, who have promised this public service, may be able to arrange their engagements to be free to deliver the address or addresses. As the constant demands of private and charity practice leave the physician little time for outside work, it is hoped smaller clubs will have joint meetings in order that this work, designed to lessen suffering and save life, may be as far-reaching as possible.

Throughout the United States such excellent work has been done to assist many of the boards of health, and also independently, by public-spirited men and women in work for pure milk, clean streets, prevention of tuberculosis, etc., etc., that we hope to have their hearty cooperation in this wider work for the public good.

CENTRAL COMMITTEE

Hon. Chairman, S. R. A. Dolley, M.D., Rochester, N. Y.
R. S. Morton, M.D., Chairman, New York City.
E. Garrigue, M. D., Secretary, New York City.
A. Gregory, M.D., Treasurer, New York City.
L. H. South, M.D., Kentucky.
S. C. Buckley, M.D., Illinois.
R. T. Bullard, M.D., California.
A. L. Hamilton, M.D., Massachusetts.
M. Holliday, M.D., Texas.
L. L. Liebhardt, M. D., Colorado, State Secretary of the Public Health Education Committee.

We have covered a large field of education and part of the success of the work has been due to the fact; for not only have the topics been presented in a number of states but their multiplicity has made it possible for many physicians to take part in the work, each bringing the prestige of an expert to add to the force of the teaching.

THE WORK IN NEW YORK AS A SAMPLE

The work in New York City may be taken as a type of the whole. Leaflets were distributed among all club, charity and social organizations, and as a result many requests came from them for a single lecture or a series of lectures; on pages 66 and 67 of our report you will see how wide was the variety of groups who wished this education, from the colored orphan asylum to the most exclusive clubs.

The plan of work was then brought before the Medical Society of the County of New York and a committee of both men and women appointed to cooperate with the American Medical Association committee.

The members are as follows:

Thomas Darlington, M.D.
Henry P. DeForest, M.D.
Norman E. Ditman, M.D.
Caroline S. Finley, M.D.
Alice Gregory, M.D.
Luther H. Gulick, M.D.
H. Seymour Houghton, M.D.
John H. Huddleston, M.D.
Woods Hutchinson, M.D.
Abraham Jacobi, M.D.
Elizabeth C. Jagle, M.D.
John J. Moorehead, M.D.
Prince A. Morrow, M.D.
Grace Peckham Murray, M.D.
William H. Park, M.D.
Angenette Parry, M.D.
Victor C. Pedersen, M.D.
Godfrey R. Pisek, M.D.
William M. Polk, M.D.
Charles H. Richardson, M.D.
Louis Livingston Seaman, M.D.
Isabelle Thompson Smart, M.D.
Fielding Lewis Taylor, M.D.
Frank Van Fleet, M.D.
Antoine P. Voislawskey, M.D.
James J. Walsh, M.D.
Anna W. Williams, M.D.
John A. Wyeth, M.D.
Grace C. Prior Yankauer, M.D.

And under their auspices a series of 12 lectures have been given, each topic being presented in its different aspects by different physicians, so leaving in the minds of the audience a constructive whole.

The seating capacity of the auditorium was for 300, but adjoining rooms had to be opened on all occasions, and there was scarcely standing room, for the audiences often numbered over 500 persons, representatives of every class and station in life.

A similar course of lectures was given in Brooklyn with equal success, and in many other places the work has gone forward with the cordial and valuable cooperation of the County Medical Societies and the help of many public-spirited individuals.

RESULTS OF A YEAR'S WORK

The results have been that the laity in many places have come to a more thorough understanding of the regular physician's position, as unselfish advisor and trained scientist, and therefore the prejudice and spirit of opposition which have been aroused by antivivisectionists and others have been lessened.

We have been able to accomplish a great deal because many of our committee members, and also members of women's clubs have organized hygiene committees throughout the United States and are now in touch with 900,000 women. In each locality these committees are under the guidance of a chairman, who is also a member of the Public Health Education Committee of the American Medical Association, in this way forming a most valuable alliance for the prevention of disease between the mothers of America and the physicians who are willing to give their time and strength in teaching these mothers how to protect their children and all who are under their care.

THE REASONABLENESS OF THIS SERVICE

Since each of us gives an average of 100 hours a year in clinical work for the gratuitous curing of disease, your committee feels that it is reasonable to request that other physicians should be willing to spend from one to four hours a year in gratuitous teaching, for the prevention of disease, and with this small effort on the part of every one the aggregate benefit to humanity will be enormous. Our financial statement and our indebtedness to the Russell Sage Foundation will be found on page 107 and the work we have done in cooperation with other organizations on pages 10 and 11.

There are sixty-eight national organizations for social betterment. The most valuable asset to the nation is health. This is an age of philanthropy; the greatest and most far-reaching benefit is medical philanthropy, and in this committee working at your request we have felt it our duty to you to show the American Medical Association ready to take its place in this important line of the nation's work, for no other organization can be so fitted to lead a campaign for the promotion of the health of American citizens as the noble body of physicians this House of Delegates represents.

Many requests for lectures have come to us from labor unions and other groups of men, especially those in trades leading to pulmonary infection, and as we believe all work for the good of the race is best done by men and women working together; in closing this brief report we wish to request that the men members of the American Medical Association who have been working with us in county medical societies committees, and other American Medical Association men interested in public health education, be permitted to become members of this committee.

Assuring you of the privilege I have felt it to be to have even a small part in the good work which has gone forward under your auspices, this report is respectfully submitted.

Rosalie Slaughter Morton, *Chairman.*

On motion of Dr. Samuel Wolfe, Pennsylvania, the report was referred to the Reference Committee on Hygiene and Public Health.

APPROPRIATION RECOMMENDED FOR PUBLIC HEALTH EDUCATION

Dr. Samuel Wolfe, Pennsylvania, in connection with the above report, presented the following resolutions:

Whereas, The report of the Public Health Education Committee, formed in response to a resolution passed by the House of Delegates at its last session in Atlantic City, shows a widespread interest in the education of the general public in matters pertaining to health; and

Whereas, Great opportunity for valuable work lies before the Public Health Education Committee; be it

Resolved, That a standing committee composed of men and women members of the American Medical Association be appointed by the President to carry on public health education work as outlined by the report of the special Public Health Education Committee; and be it further

Resolved, That the Board of Trustees be directed to appropriate a sum of money sufficient to enable this committee to continue and develop its work.

On motion, the resolutions were referred to the Board of Trustees.

Report of the Reference Committee on Legislation and Political Action

Dr. J. W. Clemmer, Ohio, Chairman, presented the following report of the Reference Committee on Legislation and Political Action:

To the Members of the House of Delegates of the American Medical Association:

Your committee has carefully considered the various matters presented to it and respectfully report as follows: We congratulate the Committee on Uniform Medical Practice Act on the gratifying progress made in that matter and recommend that the committee be continued.

We invite the attention of the house to the exceedingly gratifying progress made during the past year in the direction of defeating the optometry bills in five states, a very welcome break in the success which has hitherto followed the efforts of the advocates of the objectionable optometric legislation. A success which has resulted in securing the passage of optometry bills in twenty-two states. We consider that this desirable outcome of the past year's work is an indication of what can be done by an aroused profession and urge our members to increased efforts along this line.

The success of the movement to prevent optometry legislation is a source of greatest satisfaction and reflects the highest credit on the committee having the matter in charge, and especially on Dr. Gay, whose untiring efforts in the preparation and circulation of literature on the subject have been so potent a factor in preventing optometry legislation.

COMMENDATION OF LEGISLATIVE BUREAU

Your committee especially commends the work done by the Bureau of Medical Legislation in extending its valuable aid to state and other medical bodies, and strongly recommends that this work be still further prosecuted and respectfully urges that the trustees take the necessary steps to secure early publication of the proposed hand-book of court decisions in regard to medical practice, and similar legislation.

We congratulate the Association and the Committee on the Carroll Fund on the striking success which has crowned their efforts and recommend the continuance of the committee until they can complete the transfer of their trust.

We congratulate the National Legislative Committee in securing the promise of the cooperation of the Civic Federation and its branches, and that of the state commissions on uniform laws. Their assistance should be a great value in framing and securing the passage of proper laws in regard to medical practice and other subjects in which the profession is especially interested.

As the report of the Committee on Patents and Trade-marks was fully considered at the Atlantic City session in 1909 by both the Reference Committee and the House of Delegates, we agree in the recommendation of the said committee that the question of further action be referred to the Legislative Committee and the special committee discharged.

In regard to that portion of the report of the Legislative Committee which refers to the National Public Health Legislation, your committee indorses the satisfaction expressed by the Legislative Committee in the great public interest which has been aroused in the matter, and we respectfully recommend that the proper agencies of the Association take the necessary steps to increase this interest, and to correct the misapprehension, instigated by unscrupulous and venal interests, as to the purposes of national health legislation. In view of the statement made in the report of Dr. McCormack and the reference of that report to another committee, we do not feel that we are called on to make any definite recommendations in regard to legislation.

As the report of the Board of Instruction on Medical Subjects contains the statement that its work has been largely held in abeyance awaiting the organization of the Council on Public Health, Publicity and Legislation, which will prevent duplication of activities and results in economy of administrative effort, and as the report of the committee in regard to this proposed Council has been referred to another committee no recommendation is necessary.

We recommend to the House the passage of the resolution adopted by the Legislative Council at its Chicago meeting, as follows:

> *Resolved*, That the conference recommends that state food laws be so amended as to provide that advertisements of foods and drug products correspond with the labels; and that the drug section of the model pure food laws conform as closely as possible to the national Food and Drugs Act.

We recommend that the resolutions presented by Dr. Sanders on behalf of the Medical Association of the State of Alabama be referred to the careful consideration of the committee on National Health Department Legislation which we understand is to be appointed by the President.

PRAISE FOR DR. REED'S WORK

While the personal communication of Dr. Reed, for eight years Chairman of the Legislative Committee, does not come before your Reference Committee for review, the committee feels that the Association should take this opportunity to express its appreciation of the great, untiring, loyal and faithful services of Dr. Reed in promoting the successful work of his committee, services which have involved the greatest sacrifice of both his time and thought, to voice its deepest regret that Dr. Reed feels it impossible to continue to lead in this work, to state that the Association gladly accept his proffered offer of cooperation in legislative activities in the future in some other capacity, and to express to him its sincere thanks for his invaluable services and the loyal spirit which has inspired him.

J. W. Clemmer, *Chairman.*

It was moved that the report be adopted and the recommendations of the committee be concurred in. Seconded.

The report was discussed by Dr. C. S. N. Hallberg, and Dr. G. B. Young, Illinois, after which Dr. Hallberg moved to amend by adding the words, "provided all drugs conform to the standards of the United States Pharmacopeia and the National Formulary."

The amendment was seconded, accepted, and the original motion as amended was carried.

Report of the Reference Committee on Hygiene and Public Health

The Secretary read the following report of the Reference Committee on Hygiene and Public Health:

To the Members of the House of Delegates of the American Medical Association:

ACTION ON CORONERS DEFERRED A YEAR

Your committee, to which was referred the resolution regarding the need for change in the present coroners system in the United States, has carefully considered the same and begs to report that owing to the necessity of careful investigation of the legal and other phases of this question, it is impossible to make a satisfactory report at this time, and it is recommended that this resolution be referred to the permanent Committee on Medical Legislation with instructions to thoroughly inquire into all points, both legal and medical, which may be related to this subject, and to report on the same at the next annual meeting.

JOURNAL COMMENDED FOR JULY FOURTH WORK

The Reference Committee on Hygiene and Public Health, to which was referred the resolution commending the statistical and editorial work of The Journal of the American Medical Association in reference to the fatalities and casualties resulting from the present methods of celebrating the Fourth of July, respectfully recommend that the resolution be adopted.

William N. Wishard, *Chairman.*

On motion, the report was adopted.

Report of Reference Committeee on Reports of Officers

Dr. George W. Guthrie, Pennsylvania, Chairman, read the following report of the Reference Committee on Reports of Officers with reference to the report of the Committee on Organization:

To the Members of the House of Delegates of the American Medical Association:

DEPARTMENT OF HEALTH BILL URGED

Your committee wishes to congratulate Dr. J. N. McCormack and his co-workers on the excellent and efficient manner in which they have conducted the work of organization and education during the past year. We recommend that the work along these lines be broadened and extended; we recommend the adoption of the report of the Committee on Organization, including the resolution embodied therein, as follows:

SPECIAL COMMITTEE AUTHORIZED

Resolved, That the President be, and is hereby, authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for the National Department of Public Health, to be presented to the next session of Congress, in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the cooperation and cooperate with other organizations having the same purpose in view.

George W. Guthrie, *Chairman;*
W. B. Russ.
C. R. P. Fisher,
D. S. Fairchild,
Victor H. Stickney.

At the conclusion of the report Dr. Guthrie moved its adoption.

Seconded.

Dr. Frank Billings, Illinois, moved to amend that the President, Dr. Welch, be named as a member of the committee.

This motion was seconded by several.

The amendment was accepted and the original motion as amended was carried.

Resolutions Regarding Owen Bill

Dr. Guthrie, Pennsylvania, presented the following resolution, which, on motion of Dr. W. W. Richmond, Kentucky, was unanimously adopted by a rising vote:

Resolved, That the principles of the Owen Bill, having for its object the creation of a National Department of Health, now pending in the Senate, and similar bills introduced in the House by Representatives Simmons, Creager and Hanna, be, and are hereby, heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Irving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes, long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people, to the extent of hundreds of millions of dollars annually, and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of conspirators, and who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

Report of the Reference Committee on Miscellaneous Business

Dr. Edwin Walker, Indiana, read the report of the Reference Committee on Miscellaneous Business, as follows:

To the Members of the House of Delegates of the American Medical Association:

NEW OFFICIAL BUTTON

The Reference Committee on Miscellaneous Business, to which was referred the report of the Committee on Insignia for the American Medical Association, respectfully reports that it has taken up this question with both committees and thoroughly discussed this matter.

Both committees are unanimous in the opinion that the color of the new emblem should be scarlet and gold and that the emblem should be the knotty rod, entwined with the serpent. We recommend that the button should be circular, one-half inch in diameter, the central portion scarlet enamel, on which shall be placed the serpent, and the knotty rod in gold, this to be surrounded by a band of gold, in which the letters "A. M. A." should appear in scarlet enamel.

T. A. Woodruff,
Edwin Walker,
Ridgely B. Warfield,
E. J. Goodwin.

On motion, the report was adopted.

Report of the Committee on Awards

Dr. E. E. Southard, Massachusetts, read the following report of the Committee on Awards:

To the Members of the House of Delegates of the American Medical Association:

We recommend the award of a gold medal to Dr. Claude A. Smith, Atlanta, Ga., for an exhibit bearing on experimental researches on hook-worm disease.

We recommend that no medal be awarded for work in clinical surgery.

We recommend that certificates of honor be awarded to the following exhibitors:

1. University of Minnesota.
2. St. Louis University—Exhibit of Research Work.
3. St. Mary's Hospital, Rochester, Minn.
4. St. Louis City Hospital.
5. Indianapolis Department of Public Health.
6. University of Michigan.
7. Monlogos of Skin Disease: Dr. Honwink, St. Louis.
8. Special Committee on Prevention of Blindness, New York.
9. Northwestern University, Chicago.
10. St. Louis Medical History Club.

Respectfully yours,

E. E. Southard.
T. D. Coleman.
H. H. Young,
Committee on Awards for Scientific Exhibits.

On motion, the report was adopted.

Resolutions on Dr. Ricketts

Dr. T. D. Tuttle, Montana, Chairman of the Committee appointed to draft suitable resolutions in regard to the late Dr. Ricketts, read the following:

Whereas, Howard Taylor Ricketts, a member of the American Medical Association, lost his life on May 3, 1910, from typhus fever, contracted while engaged in an investigation of that disease in the City of Mexico; and

Whereas, He sacrificed himself in the study of a preventable disease and in the interest of the health and lives of the human race; and

Whereas, His masterly attainments as a scientific worker in this and other fields rendered his life of inestimable worth to the medical profession and the world at large; therefore, be it

Resolved, That the American Medical Association, in convention assembled, herewith express its high appreciation of the ideals, the efforts and the achievements of this brilliant investigator, and its deep sorrow at the loss of a most brilliant investigator, and its deep sorrow at the loss of a most valued and cherished member; and

Resolved, That we herewith express our sorrow in the death of Dr. Conneffe, of Ohio, who lost his life as a result of infection with typhus fever while working with Dr. Ricketts in Mexico City; and

Resolved, That these resolutions be spread on the minutes of this Association and published in The Journal.

T. D. Tuttle.
Frank Billings.
Alexander Lambert.

On motion, the resolutions were adopted by a rising vote.

Associate Members Elected

Dr. J. H. White, Louisiana, presented the following communication from the Section on Preventive Medicine and Public Health:

To the Members of the House of Delegates of the American Medical Association:

The officials of the Section on Preventive Medicine and Public Health nominate for associate membership in the American Medical Association John M. Glenn, New York, Director of the Russell Sage Foundation.

Marshall Langton Price, Secretary.
J. N. Hurty, Chairman.

On motion, the nominee was elected to associate membership.

The Section on Pharmacology and Therapeutics recommended that Leonard A. Seltzer, Detroit, be made pharmaceutical member, and on motion, the recommendation was concurred in.

The Section on Pathology and Physiology nominated for associate membership P. B. Hawk, Urbana, Illinois; A. J. Carlson, Chicago, and Leo Loeb, Philadelphia, and, on motion, the nominations were confirmed.

Resolution on Optometry, Blindness, Etc.

Dr. Chas. Jewett, New York, offered the following resolution:

Resolved, That we deem it extremely unfortunate that Columbia University, New York, related as it is to medical education, should have seen fit to establish a school of optometry for opticians, thus virtually giving countenance to the practice of medicine by persons who have not received a medical education.

On motion, this resolution was referred to the Judicial Council.

RESOLUTIONS FROM THE SECTION ON OPHTHALMOLOGY

Dr. T. A. Woodruff, Illinois, presented the following resolutions from the Section on Opthalmology:

Whereas, In many states examining boards of optometrists have been legalized and are assuming in their examinations of students prerogatives of the medical profession; and

Whereas, In a number of states either the governor or the board of medical examiners has appointed ophthalmologists to serve with opticians in examining candidates for license in the mechanical examination of eyes (so-called optometry); and

Whereas, Such affiliations on the part of medical men are practically endorsements of the optician's claim that laymen without medical education are capable of prescribing for errors of refraction; and

Whereas, These underlying ocular defects can only be diagnosed and corrected by the educated physician, who can appreciate this special work, by functional and objective examination; and

Whereas, This matter assumes importance because in many states the examining optician without medical training or responsibility is seeking legal authority to make diagnosis of and prescribe for ocular defects; therefore, be it

Resolved, That the Section on Ophthalmology of the American Medical Association memorializes its House of Delegates with the following petition:

The Section prays: That the House of Delegates express its disapproval of ophthalmologists serving with opticians on boards examining men who have not taken medical courses endorsed by the Association of American Medical Colleges and considers the acceptance of such appointment by ophthalmologists as contrary to the spirit of the code of ethics of the American Medical Association.

That the House of Delegates urge on all members of the American Medical Association, first, that legal recognition of the optician to diagnose the condition of the eye is an infringement on medical practice laws, and therefore should not be sanctioned by any state or institution; second, that referring patients to opticians by a physician should be deprecated because it is not only exposing them to the risk of incomplete diagnosis and unnecessary suffering, but is aiding and abetting men who have no medical education, in their acknowledged and open efforts to enter on an important field of special medical practice.

Furthermore, the House of Delegates is memorialized to request the American Medical Association to publish a history of so-called optometry and optometry colleges, and that such pamphlet be sent to officials of state medical societies and medical men interested in defeating the efforts of these men to enter the medical profession by false pretenses.

The resolutions include the recommendation for the appointment of a committee of two who are members of the Section on Ophthalmology to furnish the necessary data.

RESOLUTIONS ON TEACHING IN MEDICAL COLLEGES OF INFECTIOUS EYE DISEASES AND OF REFRACTIVE ERRORS

Whereas, The refracting of human eyes is an important part of medical practice;

Whereas, The Section on Ophthalmology of the American Medical Association recommends that "every general practitioner should have the training in ophthalmology which will enable him to manage infectious diseases of the eye and its refractive defects."

Resolved, That the House of Delegates of the American Medical Association:

1. Requests its Council on Medical Education to arrange a curriculum able to equip medical students with such training, and recommends medical colleges to adopt the same.
2. Approves of the state registration boards, now requiring it for license; and
3. Advises like action by other state registration boards at an early date.

RESOLUTIONS REGARDING THE VISUAL REQUIREMENTS OF PILOTS

The following resolutions were unanimously adopted by the Section on Ophthalmology:

Whereas, Investigation has shown that the visual requirements of pilots in the United States under both federal and state supervisions are vague and inadequate, it is recommended that the American Medical Association, through its President, shall appoint a commission from its body, including members from the Section on Ophthalmology, to confer with the Department Commission of Commerce and Labor, and with the Marine-Hospital Service to unite in establishing proper visual standards and tests to govern these public servants; and, further, that the subject under discussion be brought before the House of Delegates with the request that that body give its official sanction and support to the purposes of the commission; and, further, that the present chairman of the Section on Ophthalmology be made a member of the commission.

RESOLUTIONS REGARDING A COMMITTEE ON BLINDNESS

Whereas, The American Medical Association has at present a Committee on Ophthalmia Neonatorum, the purpose of which is the prevention of blindness from this disease; and

Whereas, Trachoma, industrial accidents, intermarriage of the blind and wood alcohol amblyopia are also preventable causes of blindness; therefore, be it

Resolved, That the House of Delegates be requested to appoint a "Committee on the Prevention of Blindness," the membership of which shall consist of the chairman of the Committee on Ophthalmia Neonatorum and such other members for the investigation of the above causes of blindness as the President may appoint. This committee shall invite the cooperation of the American Ophthalmological Society and similar organizations.

On motion, these resolutions were referred to the Reference Committee on Hygiene and Public Health.

Resolution on Year Book

Dr. Alexander Lambert, New York, offered the following:

Whereas, Representatives of the learned societies of the United States of the various professions have met and decided to publish an American Year-Book, in which the advancements in knowledge in all professions shall annually be published; therefore, be it

Resolved, That the House of Delegates of the American Medical Association authorizes the Board of Trustees to appoint a member to serve on the supervisory board of the American Year-Book.

On motion, this resolution was referred to the Board of Trustees.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Alexander R. Craig, Pennsylvania, read the report of the Reference Committee on Amendments to the Constitution and By-Laws.

To the Members of the House of Delegates of the American Medical Association:

The Reference Committee on Amendments to the Constitution and By-Laws beg to submit the following report of the House of Delegates on the matters which have been referred to them for their consideration.

In the report of the Committee on Uniform Regulation of Membership and from other sources a number of proposed changes in the Constitution and By-Laws came before this Reference Committee and we recommend the adoption of the appended suggestions. We recommend the substitution of the following change in Article 4 of the Constitution for that offered at the last annual session of the House of Delegates.

Article IV.—Amend the present article to read as follows: State and territorial associations which have or which hereafter may become organized in accordance with the general plan of organization of the American Medical Association, and which have declared by resolution their allegiance to the said American Medical Association and which shall agree with other state and territorial medical associations to the formation and perpetuation of the House of Delegates of the American Medical Association, shall be recognized as constituent associations on acceptance of their application for recognition by the House of Delegates.

Amendments to the By-Laws

Chapter I.—Membership

Section 1. Classes of Members.—There shall be three classes of members: Members, associate members, and honorary members.

Sec. 2. Members.—Any physician reported as a member in good standing of the constituent association by the secretary of that association, and who shall make application on the prescribed form, and who shall have paid the annual assessment and the subscription to The Journal of the American Medical Association for the current year, shall be a member.

Commissioned medical officers of the United States Army, United States Navy, and the United States Public Health and Marine Hospital Service, shall be members of this Association so long as they retain their connection with their respective service, and shall not be required to pay dues and shall not receive The Journal of the American Medical Association except by personal subscription.

Sec. 3. Tenure of Membership.—Membership in this Association shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the General Secretary shall be officially informed by the secretary of the constituent association of the state in which a member resides that he is *not in good standing*, the General Secretary shall remove his name from the membership roll of the American Medical Association and shall notify him of the action taken, together with the reason therefor.

Sec. 4.—A member who becomes a resident of another state, to retain his membership in the American Medical Association, must become a member in the constituent association of the state to which he has removed within one year following his change of residence.

Sec. 5. Delinquency.—Any member who, for one year, has failed to pay his annual assessment and the subscription to The Journal, shall forfeit his membership thirty days after notice from the General Secretary has been mailed to his last known address.

Sec. 6.—Any former member who complies with Section 2, Chapter 1, shall be reinstated on payment of his current indebtedness.

Sec. 7. Associate Members.—The following may be elected in accordance with Section 4, Chapter VII, to associate membership: Physicians who are members of chartered national medical societies of foreign countries adjacent to the United States; dentists holding the degree of D.D.S. who are members of state or local dental societies; and pharmacists who are active members of the American Pharmaceutical Association.

Sec. 8. Honorary Members.—Physicians of foreign countries may be elected honorary members by the House of Delegates in accordance with Section 4, Chapter 7.

Sec. 9. Invited Guests.—Scientists may be invited by the general officers or by the officers of a Section to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

Chapter II.—Registration

Section 1.—No member shall be eligible to register at an annual session until he has paid all of his current indebtedness.

No member shall take part in the proceedings of the Association or of any of the Sections until he has registered his name and address in the registration office.

A member on registering shall designate the Section in which he wishes to be enrolled, but no member shall register in more than one Section at any annual session.

Chapter IV.—Qualifications, Term, Apportionment and Registration of Delegates

Sec. 2. Term.—Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the Section, or delegates appointed from the United States Army, the United States Navy and the United States Public Health and Marine-Hospital Service, shall hold office for one year.

Sec. 3. Apportionment of Delegates.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on re-apportionment of which the President and General Secretary shall be members. This committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 2, of the Constitution, and in proportion to the membership of each constituent association on April 1 of the year in which the apportionment is made, as shown by the certificates of membership submitted by the secretary of the constituent associations. This apportionment shall take effect at the annual session next succeeding that at which it is made, and shall prevail until the next triennial apportionment, whether the membership of the constituent associations shall increase or decrease.

Sec. 4. Registration of Delegates.—Each delegate before being seated shall deposit with the Committee on Credentials a certificate signed by the secretary under the seal of the constituent association, stating that he has been legally and regularly elected a delegate to the American Medical Association. Each delegate from a Section shall present credentials signed by the chairman and secretary of the Section which he represents. Each delegate from the government services shall present credentials from the surgeon-general of the department which he represents.

Sec. 5. A Delegate Once Seated to Retain His Seat for the Entire Session.—The credentials of a delegate having been accepted by the credentials committee and his name placed on the roll of the house, he shall remain as the duly accredited delegate of the body which he represents until final adjournment of the session and his place shall not be taken by any other delegate or alternate.

Chapter IV.—Procedure of House of Delegates

Sec. 2. Limit of Time for Introduction of New Business.—No new business shall be introduced into the House of Delegates after the second day of the annual session (third day of the House of Delegates), unless with unanimous consent; and such new business, whether in the form of a motion, a resolution, or a memorial, shall require a two-thirds affirmative vote for adoption.

Chapter VI.—Meetings of the House of Delegates

Sec. 2. Special Sessions.—Special sessions of the House of Delegates shall be called by the president on a written request of at least twenty-seven members of the last House of Delegates, provided that they represent the majority of the constituent associations. When a special session is called by the president the general secretary shall mail a notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting, and the object of such special session. No other business shall be transacted at the special session than that specified in the call.

Chapter VII.—Nomination, Election and Installation of Officers, Trustees, Associate and Honorary Members

Section 1. Nominations.—Nominations for office shall be made orally; a nominating speech must not exceed two minutes. The treasurer shall be nominated by the Board of Trustees.

Sec. 2. Method of Holding Elections.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of the votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 4. Associate and Honorary Members.—Applications for associate membership from foreign physicians must be approved by the Judicial Council, applications from dentists must be approved by the Section on Stomatology, and from pharmacists by the Section on Pharmacology and Therapeutics.

Nominations for honorary membership shall be made by the Sections and must be submitted to the House of Delegates not later than the second day of the annual session. These applications and nominations shall be referred without debate to the Committee on Sections and Section Work, which shall consider the scientific attainments and professional character of the applicants and report to the House of Delegates.

The election of associate and honorary members shall immediately follow the election of officers. Not more than three honorary members shall be elected in any one year.

Sec. 5. Installation.—The general officers of the Association, except the President, shall assume their duties at the close of the last meeting of the annual session at which they are elected.

Chapter VIII.—Duties of Officers

Section 1. President.—The President shall preside at the General Meeting and at the meetings of the House of Delegates, and shall perform such duties as custom and parliamentary usage require. On the morning of the first day of the annual session following his election he shall deliver an address at the General Meeting on such matters as he may deem of importance to the Association. He may at any time make suggestions in writing to the House of Delegates or to any special or standing committee.

Sec. 3. Secretary.—The Secretary shall give due notice of the time and place of all annual and special sessions of the Association and of the House of Delegates in The Journal of the American Medical Association. He shall send an official notice of each annual or special session to the secretary of each constituent association and to the secretary of each section. He shall keep the minutes of the House of Delegates. He shall notify members of committees of their appointment and of the duties assigned to them. He shall verify the credentials of the members of the House of Delegates and shall provide a registration book in which shall be recorded the name of each delegate in attendance at each session, together with that of the Association, government service or Section which he represents. He shall prepare a roll of the delegates attending each session to facilitate voting by roll-call. He shall prepare for publication the official program of each session, and shall perform such other duties as may be directed by the House of Delegates or the board of trustees.

Chapter X.

Section 1. Classification of Committees.—Committees shall be classified as (a) Standing Committee. (b) Reference Committee, and (c) Special Committee. These Committees shall be nominated by the President and elected by the House of Delegates unless otherwise provided for in these by-laws. Any of these committees acting during the interval between the sessions of the House of Delegates shall be subject to the Board of Trustees. In case of vacancies in Committees occurring during the interval between annual sessions the president shall have the power to appoint members to fill the vacancies until the next annual session.

Sec. 2. Membership of Committees.—Reference Committees shall be appointed by the President from among the House of Delegates. et' seq.

Sec. 3. Standing Committees.—Amend to read as follows: Standing committees shall be the following:

(a) Committee (or Council) on Medical Legislation.
(b) Council on Medical Education.
(c) Committee on Transportation and Place of Session.

Sec. 4. Judicial Council.—Amend to read as follows: The Judicial Council shall be composed of five members, to be appointed by the President on the first day of each annual session from the delegates present, and to continue in office until their successors are appointed. It shall organize by electing a chairman and a secretary, who shall keep a permanent record of its proceedings. The council shall hold such meetings during the annual session and during the year as it may deem necessary. It shall make an annual report of its proceedings to the House of Delegates. To this council shall be referred all applications for associate membership from physicians resident in foreign countries and all questions, complaints, protests and matters of an ethical nature. When these concern an individual's relations with his local society, they shall be considered by this council only after the same shall have been referred to the Constituent Association concerned or on an appeal from such Constituent Association. Its decisions shall be subject to appeal to the House of Delegates.

Sec. 5. Committee on Medical Legislation.—Amend to read as follows:

There shall be a Council on Health and Public Instruction to consist of five members, to be elected by the House of Delegates, on nomination by the President. Those first elected shall serve, one for one year, one for two years, one for three years, one for four years and one for five years, and their respective terms of service shall be determined by lot. Thereafter one member shall be elected annually, on nomination by the President, to serve five years. The Council shall organize and shall elect a chairman from its number. The Board of Trustees shall appoint a secretary on nomination by the Council, and shall fix his salary.

The Council shall adopt such rules and regulations for the government of its actions as it may deem expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees. The work of the Council shall embrace the following subjects:

(a) Legislation; (b) Organization; (c) Publicity; (d) Defense of Medical Research; (e) Public Health.

It may appoint committees to carry on the respective purposes of the Council. It shall make an annual report of its work to the House of Delegates. The office of the Council shall be at the headquarters of the Association.

Sec. 6.—Committee on Transportation and Place of Session to remain unchanged.

Sec. 8. Reports of Standing Committees.—Reports of Standing Committees, so far as possible, shall be transmitted 30 days before the annual session to the Secretary, who shall have them printed for distribution to the members of the House of Delegates.

Present Section 10 to become Section 9 and to be amended to read: These committees shall serve during the session at which they are appointed.

Chapter XII.—Sections

Section 2, page 26.—Officers of Sections.—The third sentence to be amended to read as follows: Each Section shall also elect annually one delegate and one alternate to the House of Delegates of the American Medical Association to serve one year.

Sec. 3, page 27.—Election of Officers.—The first sentence to be amended to read as follows: The election of officers shall be the first order of business of the morning meeting of the Section on the third day of each annual session.

Sec. 5, page 28.—Executive Committee.—Second and third sentences to read: In case of absence of a member of the Executive Committee from an annual session, the vacancy shall be filled by the chairman. The committee shall examine and pass on all papers, etc.

Sec. 6.—Meetings.—Strike out everything after the word "decide."

Sec. 7.—Who May Take Part in Section Work.—Members and associate members only shall have the right to participate in the business deliberations of a Section. Members and associate and honorary members and invited guests may present papers and take part in the scientific discussions.

Sec. 9, page 29.—Times at Which Titles Must Be In.—Titles of papers to be presented to the section must be in the hands of the secretary of the section at least thirty-five days before the first day of the annual session. With the title, the writer shall submit an abstract of the paper not less than thirty or more than one hundred and fifty words in length and an estimate of the time required to read his paper.

Sec. 12.—Can Present Papers Before Only Two Sections.—Amend to read as follows: No member shall present a paper or papers before more than two sections at any annual session. When more than one section is to be addressed, the titles and abstracts of both papers must be submitted to the secretaries of both sections before which the papers are to be read.

Chapter XIII.—Publication

Section 2.—Papers Must Be Ready for Publication.—Page 30 to read as follows: Each author shall hand his paper to the secretary of the section immediately after it is read. The secretary shall endorse thereon that it has been read and shall hand it to the chairman of the executive committee. All papers approved by the executive committee shall be returned to the secretary of the section, who shall at once forward them to the editor of The Journal.

Amendments to the Constitution

In view of the fact that the amendments are important and that the laws of the State of Illinois provide that any constitution of an incorporated body may be amended at any annual session of that organization, the committee recommend the unanimous consent and the adoption of the following changes in the constitution:

Article 5.—House of Delegates

Second sentence to be amended to read as follows: It shall consist of delegates elected by the constituent associations and by the scientific sessions of the American Medical Association, and appointed by the surgeon generals from the medical departments of the Army, Navy and the United States Public Health and Marine-Hospital Service, etc.

Article 8.—Annual Sessions

The Association shall hold an annual session at a time and place to be fixed by the House of Delegates. The time and place of session may, however, be changed by the unanimous action of the Board of Trustees at any time prior to two months of the time selected for the session. The annual session may be held at any place in the United States.

Article 12.—Amendments

Amend to read:

The House of Delegates may amend any article of this constitution at any annual session, provided that the proposed amendment shall not be acted on until the next annual session following that at which it was introduced and providing that three-fourths of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

UNIFORM MEMBERSHIP

Of the recommendations submitted in the report of the Committee on Uniform Regulation of Membership, the Reference Committee recommends the following substitute for your adoption:

Resolved, That the report submitted by the above Committee on Uniform Regulation of Membership be referred to the Council on Health and Publicity with the request that these recommendations be submitted to the secretary at each constituent association for criticisms and suggestions and that the Council be requested to report on this subject at the 1911 session. The Reference Committee further recommends that the secretary send a certified copy of the constitution and by-laws of the American Medical Association as amended at this session to the secretary of each constituent association with the request that the changes be brought to the attention of the House of Delegates of the constituent Association.

The Reference Committee recommends that the resolution presented in the name of the Medical Association of the State of Alabama be referred to the Council on Health and Public Instruction for the consideration which the importance of the resolution demands.

The Reference Committee recommends that the word "general" be stricken out throughout the by-laws—when followed by secretary.

A. R. CRAIG, Chairman.

Dr. W. C. Woodward, District of Columbia, moved that the report of this committee, so far as it undertakes to alter the constitution and by-laws, be printed or mimeographed alongside of the sections which it proposes to alter, and distributed among the members of the House of Delegates for consideration on Thursday.

Seconded and carried.

Dr. Edwin Walker, Indiana, moved that the consideration of the constitution and by-laws be fixed for 10 a. m. Thursday.

Seconded.

Dr. E. J. McKnight, Connecticut, moved to amend that it be made a special order for 10 a. m. Thursday.

The amendment was seconded, accepted, and the original motion, as amended, was carried.

Resolution on Organization

Dr. Hubert Work, Colorado, presented the following:

WHEREAS, The plan of organization of the profession carried to its logical conclusion means that every member of a county society should be *ipso facto* a member of the American Medical Association, just as every member of a county society is *ipso facto* a member of a state society, and as it is the ultimate end of the plan that the American Medical Association should be coextensive with the organized profession throughout the land as nearly, if not quite, every state already has adopted the plan so far as making every member of a county society a member of a state society; therefore, be it

Resolved, That the President appoint a committee to draw up details for extending the plan to the American Medical Association, and to present this plan to the various state societies for their consideration during the coming year, and to make a report at the next annual meeting of this House.

Dr. Work moved the adoption of the resolution. Seconded.

Dr. Alexander Lambert, New York, moved as an amendment that this resolution be referred to the 'Board of Trustees because it means a separation of THE JOURNAL from the membership in a manner which involves the finances of the Association.

The amendment was seconded, accepted, and the original motion, as amended, was carried.

Report on Legislation Concerning the Sale of Habit-Forming Drugs

Dr. C. S. N. Hallberg, Illinois, presented the following report from the Section on Pharmacology and Therapeutics:

To the Members of the House of Delegates of the American Medical Association:

A resolution introduced by Mr. M. I. Wilbert at the Atlantic City session to the effect that this section request the House of Delegates to recommend to the United States government the passage of a law whi h should place the sale of certain habit-forming drugs under the control of the Department of Internal Revenue was referı d for consideration to the executive committee of this sectioı Within the past few months a bill has been introduced into the Senate by Mr. Cullom which has an object similar to that desired by Mr. Wilbert. Your committee has carefully studied this bill, and while in a general way they approve of the plan of regulating the sale of these drugs by some sort of federal license, there are a number of features in the Cullom bill which seem to the committee to be objectionable. For instance, there is a uniform tax of a dollar a pound on all substances included under the bill equally for cocain and for coca leaves and for morphin and for crude opium. As cocain is almost one hundred times as costly as coca leaves it is evident that a uniform tax would work a hardship on American manufacturers of the alkaloids and would almost exclude the importation of these crude drugs in favor of the alkaloidal principles.

Whether or not these objections could be obviated by amendments to the bill, the committee is uncertain. The whole subject is so extraordinarily complex that the commitee does not feel justified in making definite statements concerning the subject. We do not, therefore, recommend that the section take any definite action concerning this bill. We feel that the question is one of such great importance, involving as it does not only the question of the physical welfare of a large proportion of the population, but also vast financial interests and complex legal questions that it seems to us very doubtful that any conclusion reached by a single section of the American Medical Association under the conditions which of necessity pertain to the section meetings would have any real value.

M. H. FUSSELL,
REID HUNT,
H. C. WOOD, JR.

Respectfully referred, through the House of Delegates, to the Committee on Medical Legislation, American Medical Association, by the Section on Pharmacology and Therapeutics.

MURRAY GALT MOTTER, Secretary.

On motion, the resolution was referred to the Reference Committee on Legislation and Political Action.

Resolution Regarding Branch Associations

Dr. S. S. Crockett, Tennessee, offered the following resolution:

Resolved, That our representatives to the House of Delegates of the American Medical Association be instructed to urge said House to endorse existing district associations as branches of the American Medical Association, namely, Southern Medical Association and the South Western Association as existing at present, and that other branches be created in other parts of the United States.

On motion, the resolution was referred to the Reference Committee on Miscellaneous Business.

Resolutions Regarding Publication of Suicides

Dr. J. H. White, Louisiana, presented the following resolutions from the Section on Preventive Medicine and Public Health:

According to the published reports of the Census Bureau, there has been of late a marked increase in the number of suicides in this country. The death-rate from this cause per 100,000 was as follows: 1902, 12.7; 1903, 13.9; 1904, 14.8; 1905, 16.1; 1906, 14.3; 1907, 16.2, and 1908, 18.5. An increase of practically 50 per cent. in seven years demands investigation and energetic action.

The publication in the secular papers of the details of these unfortunate occurrences can do no good. On the other hand, it is well recognized, by those in a position to judge, that such publication has powerful suggestive effect on susceptible individuals, and it is unquestionably one of the most active causes of this form of death; therefore, be it

Resolved, By the Section on Preventive Medicine and Public Health that such publication of accounts of suicides is detrimental to the good of the people of this country; and that we request the House of Delegates to take action in the case by requesting the press of the land to stop such publications; and

Further, That the House of Delegates be instructed to further the enactment of a national law forbidding the use of the mails by any paper making such publication; and

Further, That the same committee be instructed to assist in the passage of state laws making such publication a misdemeanor, and providing suitable punishment therefor.

he may

RESOLUTIONS REGARDING POPULAR EDUCATIO

any time

WHEREAS, Public health administration is greatly h egates or to
ular education on hygienic matters, and cannot advar
the state of common knowledge; and due notice of
WHEREAS, Our literary colleges and normal scho sessions of the
practically no instruction of this kind; and
WHEREAS, Much of the hygienic instruction in th THE JOURNAL
of the land is based on misinformation; all send an offi-

Resolved, By the Section on Preventive Medicine and Public Health that such instruction by lectures or otherwise should be given in every such institution of learning; and

Resolved, That the House of Delegates be asked to appoint a committee to promote a course of instruction in all literary colleges and normal schools.

On motion, the resolutions were referred to the Reference Committee on Hygiene and Public Health.

Communication Regarding Dr. McCormack

Dr. W. E. Anderson, Virginia, read the following communication:

As a representative from Virginia to the American Medical Association, I want to call your attention to the excellent service rendered our state by Dr. J. N. McCormack in the addresses made by him last year. As you know, he spent two weeks with us and gave two talks a day, one to the physicians and one to the public. He never failed to elicit interest among the physicians in promoting more cordial relations among themselves and a higher standard of ethics and scientific medicine. In his talks to the public he always developed a greater appreciation of physicians and stimulated public health work. We hope to have Dr. McCormack for another two weeks in July.

I am mentioning this to you as Dr. McCormack came to Virginia as the official representative of the American Medical Association, and the occasion may arise in the House of Delegates for you to show an appreciation of him in behalf of this state.

With kind regards, I am, very truly yours,

Ennion G. Williams,
Commissioner of Health.

Dr. Anderson said further: "Commenting on this communication, I recall with pleasure the remarks made in the House of Delegates at Portland, Ore., meeting of this Association, commending Dr. McCormack's work, speaking of the influence of continuing the same, inviting him to visit Virginia. He has twice since done this, with the splendid results mentioned in this letter. Virginia appreciates Dr. McCormack and his work, and on behalf of our delegation I respectfully request this body to let the good work go on."

There being no objection, this communication was referred to the Reference Committee on Reports of Officers.

On motion, the House of Delegates then adjourned until 10 a. m. Thursday.

Fifth Meeting — Thursday Morning, June 9

The House of Delegates met at 10 a. m., and was called to order by Third Vice-President Dr. Alexander Lambert, New York. The secretary called the roll.

The minutes of the previous meeting were read and approved.

Discussion of Amendments to Constitution and By-Laws

The Chairman stated that the special order at this time was the consideration of amendments to the Constitution and By-Laws.

Dr. T. A. Woodruff, Illinois, moved that the proposed amendments to the Constitution and By-Laws, excepting the amendment relating to the organization of the Council on Public Health and Public Instruction, to be deferred until next year, and that the Secretary be instructed to have the proposed amendments printed and distributed to the members of the House of Delegates for consideration in the meantime, and that we now proceed to take up the amendments with regard to the organization of the Council on Health and Public Instruction.

This motion was seconded by several, and after discussion by Drs. Alexander R. Craig, Pennsylvania; Charles S. Bacon, Illinois, Dr. Bacon moved that the motion of Dr. Woodruff be laid on the table. Seconded and carried.

Dr. A. T. McCormack, Kentucky, moved that Sections making changes be considered *seriatim*. Seconded and carried.

Dr. George W. Guthrie, Pennsylvania, moved the adoption f the report of the Reference Committee on Amendments to Constitution and By-Laws as a whole.

is motion was seconded by several, and after discussion s. C. E. Cantrell, Texas; E. T. Abrams, Michigan; Ed- Jackson, Colorado; Dr. Charles Chassaignac, Louisiana, that the motion of Dr. Guthrie be laid on the table. otion was seconded, but declared lost.

Dr. Chassaignac protested against such action by the House of Delegates, and thought the report ought to be read and carefully considered before adopting it as a whole.

Dr. A. T. McCormack, Kentucky, asked unanimous consent of the House of Delegates that the report be read as a whole, and as this was given, the report was read.

At the conclusion of the reading of the report, Dr. Charles S. Bacon, Illinois, raised the point of order that it was not proper for the House of Delegates to adopt this report as a whole if it meant the adoption of all the amendments to the Constitution and By-Laws. He said that the Constitution provides that amendments to the Constitution and By-Laws shall be adopted by a three-fourths vote of all members, and this could not be determined by simply adopting the report of the committee; therefore, he held that the motion to adopt the report as a whole was not a proper one.

The Chair sustained the point of order.

Dr. Alexander R. Craig, Pennsylvania, said: The committee asked for unanimous consent to permit action on the amendments to the articles of the Constitution, and this unanimous consent being denied, I move to amend Dr. Guthrie's motion to adopt the report as a whole, by taking action on all the report preceding the paragraphs referring to amendments to the Constitution.

This motion was seconded and accepted by Dr. Guthrie, and carried.

Dr. W. C. Woodward, District of Columbia, moved that the proposed amendments to Article IV of the Constitution as recommended by the committee be now adopted. Seconded and carried.

The President stated that the report of the Reference Committee on Amendments to the Constitution and By-Laws was still before the House and the substitute was now up for consideration.

Dr. A. T. McCormack, Kentucky, moved that the proposed amendments to the Constitution be laid over until next year. Seconded and carried.

Dr. McCormack asked further time for the consideration of the rest of the report, which was granted.

Dr. Charles S. Bacon, Illinois, asked unanimous consent that the By-Laws be amended to the effect that the Council on Pharmacy and Chemistry be added to the list of standing committees.

The Chair ruled that this amendment would be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

On motion, the Association adjourned until 2 p. m.

Sixth Meeting — Thursday Afternoon, June 9

The House of Delegates met at 2 p. m. and was called to order by President Welch. The Secretary called the roll.

The minutes of the previous meeting were read, corrected, and approved.

Election of Officers

The election of officers being in order, the House of Delegates then proceeded with nominations for President.

Dr. Frank Billings, Illinois, nominated Dr. John B. Murphy, Chicago, for President.

This nomination was seconded by Drs. M. L. Harris, Illinois; Charles Chassaignac, Louisiana; T. A. Woodruff, Illinois, and C. E. Cantrell, Texas.

Dr. Edwin Walker, Indiana, nominated Dr. A. Jacobi, New York City, for President. The nomination of Dr. Jacobi was seconded by Dr. V. C. Pederson, New York City.

The President appointed as tellers Drs. J. Shelton Horsley, C. S. Bacon, A. T. McCormack, and I. C. Chase.

There were 115 votes cast, of which Dr. Murphy received 77, and Dr. Jacobi 38.

Dr. Murphy was declared elected President.

ELECTION OF VICE-PRESIDENTS

The following were then nominated and duly elected Vice-Presidents.

First Vice-President, Dr. E. E. Montgomery, Philadelphia, Pa.; second Vice-President, Dr. R. C. Coffey, Portland, Ore.; third Vice-President, Dr. W. G. Moore, St. Louis; fourth Vice-President, Dr. H. L. E. Johnson, Washington, D. C.

ELECTION OF SECRETARY

Dr. I. C. Chase, Texas: Gentlemen of the House of Delegates, I am not a stranger to organization work in this country. I have been secretary of one of the largest state associations, geographically, for a number of years. I come from a state where the opposition to organized medicine was probably greater than in any other one state in the Union, and that being the case, I may be said to represent, to a certain extent, the voice of the people. I believe that there is no particular reason why we should begin at this time to separate the offices of Editor and General Secretary of the American Medical Association. [Applause.] Those of you who are familiar with The Journal and the Association work are acquainted with the fact that there are great difficulties in the way of having two heads in the work of organization. It is not only not good reasoning but poor judgment at a critical time like this in this great association to change generals at the suggestion of the enemy. [Applause.] I know not what you may think, but I feel that we should not allow the howling coyotes among the enemies of this organization, to spread broadcast over this land the false report that they have urged and have secured changes in the American Medical Association through the character of literature they have distributed all over this country. [Loud applause.]

I take great pleasure, gentlemen of the House of Delegates, in nominating for secretary of the American Medical Association, a man who has never yet failed to sacrifice his own personal interests for the good of this great cause. [Applause.]

I therefore take great pleasure in nominating our former secretary, Dr. George H. Simmons. [Loud and prolonged applause.]

Dr. W. J. Birkofer, Nebraska: It gives me great pleasure to second the nomination of our former colleague from Nebraska, Dr. Simmons. [Applause.]

Dr. J. B. Bullitt, Mississippi: On behalf of the South, I wish to second the nomination of Dr. Simmons for secretary, a man who has done probably more for organization in this Association than any other one man in its ranks.

Dr. B. H. Blair, Ohio: Coming from a state which is perhaps the fourth largest representative state in the Union, whose profession has never faltered or failed, I desire to second the nomination of Dr. Simmons. [Applause.]

Dr. A. L. Wright, Iowa: Iowa unanimously seconds the nomination of Dr. Simmons. [Applause.]

Dr. Mack Rogers, Alabama: I would be derelict in my duty if I did not second this nomination on behalf of the state of Alabama.

Dr. A. R. Mitchell, Nebraska: I have been a fellow-citizen of Dr. Simmons for many years and during all those years and up to the present time there has never been a cloud on his character and as a representative from Nebraska, I take great pleasure in seconding the nomination of Dr. Simmons, and if it is in order I move that the rules of the House of Delegates be suspended and that the President cast a unanimous ballot of this House of Delegates for Dr. Simmons as secretary. [Applause.]

Dr. Stephen C. Glidden, Illinois: I wish to second the nomination of Dr. Simmons.

At this juncture, there were cries of "Speech! Speech!"

Dr. Simmons said: "I appreciate this honor, but I really believe it would be better for me not to accept this office. There is a great deal of responsibility connected with it, and I have realized in the last three or four years that we are not making as much progress in organization work as we should make. I, myself, think that new blood is needed. We are all liable to get into ruts and I am afraid I have gotten into a rut. Nevertheless, after this expression of your appreciation, I will say this, that while personally my own feeling is that I should not accept the position, if you insist that I should fill the office another year, I will do it. [Applause.] I believe, however, that it would be better for the House to select some one else."

Dr. J. A. Walker, Oklahoma: You have heard representatives of the old states, but I represent a new state. This is a matter in which I believe Dr. Simmons has no say. We are running this. [Laughter.] I think team work is very important, and I look on Dr. McCormack as our pitcher and on Dr. Simmons as our catcher. They have done excellent team work. They have won out. [Applause.] Dr. Simmons is in error when he said that not as much progress has been made in organization work as there ought to have been made. Of course, he has not been in Oklahoma. We have invited him to visit us and I wish to say to you that we have made great advancement in medical organization under Dr. McCormack. [Applause.]

We had the pleasure of having Dr. McCormack with us three times and he has revolutionized the practice of medicine in Oklahoma and medical organization, and I believe we are as well organized in that state and are working in as perfect order as they are anywhere in the United States, not excepting Illinois, Indiana, or any other state, and I rise in behalf of Oklahoma to second the nomination of Dr. Simmons. I also wish to extend to the man from Texas, my native home, the hand of fellowship for nominating Dr. Simmons.

Dr. C. E. Cantrell, Texas: On behalf of the delegates of this House, I move we all nominate Dr. Simmons by a rising vote.

It was then moved that nominations be closed and the President be instructed to cast the ballot of the House of Delegates for Dr. Geo. H. Simmons as secretary.

This motion was seconded by several and was carried unanimously.

The President said he took great pleasure in casting the ballot and announcing that Dr. Simmons had been unanimously elected Secretary of the Association. [Loud Applause.]

There were cries of "Speech! Speech!"

Dr. Simmons said: I do not know that I am in a condition to speak. I thoroughly meant what I said in my report. I also meant what I said a few moments ago, that I was ready to step to the front, and especially so long as I realized that there are around me and back of me the best element of the medical profession of this country. [Applause.]

In thanking you, I can only say that I will do the best I can in the future as I have done in the past. [Applause.]

ELECTION OF TREASURER

Nominations for treasurer being in order, Dr. M. L. Harris, for the Board of Trustees, nominated Dr. Frank Billings.

The nomination was seconded by Dr. T. D. Coleman, Georgia.

There being no other nominations, Dr. Alexander R. Craig, Pennsylvania, moved that the rules be suspended and the Secretary be instructed to cast the ballot of the House for Dr. Billings as treasurer.

This motion was seconded by several, and carried. The Secretary cast the ballot and Dr. Billings was declared duly elected treasurer of the Association.

TRUSTEES ELECTED

The following trustees were then elected:

Trustees.—Dr. W. W. Grant, Denver; Dr. Frank J. Lutz, St. Louis; Dr. C. E. Cantrell, Greenville, Texas.

COMMITTEES APPOINTED

The President then made the following appointments, which were confirmed by the House of Delegates:

Council on Medical Education.—Dr. George Dock, St. Louis, to succeed Dr. E. E. Southard, Boston, to serve until 1915.

Council on Health and Public Instruction.—Dr. H. M. Bracken, Minneapolis, to represent public health; Dr. W. B. Cannon, Boston, to represent defense of medical research; Dr. Henry B. Favill, Chicago, to represent public instruction; Dr. J. N. McCormack, Bowling Green, to represent organization, and Dr. W. C. Woodward, Washington, D. C., to represent legislation.

Report of the Reference Committee on Sections and Section Work

Under this head Dr. J. E. Weeks, New York, Chairman, read the following report of the Reference Committee on Sections and Section Work:

To the Members of the House of Delegates of the American Medical Association:

ELECTION OF HONORARY AND ASSOCIATE MEMBERS

The Reference Committee on Sections and Section Work, to which was referred the recommendation of the Section on Nervous and Mental Diseases that Dr. Alfred Saenger, of Hamburg, Germany, be elected an honorary member of this Association; the recommendation of the Section on Ophthalmology that Mr. J. Herbert Parsons, F.R.C.S., be elected an honorary member of this Association; also the nomination by Dr. Frank Billings of Dr. James H. Honan, of Berlin, Germany, for election to honorary membership in this Association, desires to report favorably in regard to these recommendations.

J. E. WEEKS, Chairman.

On motion of Dr. A. T. McCormack, Kentucky, the Secretary was instructed to cast the ballot of the House for the election of these honorary members, which he did, and they were declared duly elected.

Dr. Graham Lusk, New York City, was nominated for associate membership by the Section on Pathology and Physiology, and on motion, the nomination was confirmed.

A report from the Section on Stomatology was read, recommending that the following gentlemen be made associate members:

L. P. BETHEL, Columbus, Ohio.
S. S. CHILCOTT, Bangor, Maine.
H. LOGAN GEARY, Seattle, Wash.
F. W. STIFF, Richmond, Va.
J. P. GRAY, Nashville, Tenn.
H. F. CASSEL, St. Louis.

On motion, the recommendation was concurred in.

Resolutions on Sex-Hygiene

By unanimous consent of the House, Dr. Thomas D. Davis, Pennsylvania, presented the following preamble and resolution, from the American Federation for Sex-Hygiene, with the request for their formal adoption. They were referred to the Council on Health and Public Instruction.

WHEREAS, The necessity daily appears more imperative of protecting innocent American women and children against infection by the social diseases, syphilis and gonorrhea; and

WHEREAS, There is ample evidence of a belief deeply grounded among the laity that sexual indulgence is necessary to the health of the normal man; and

WHEREAS, There exist, in consequence, widely differing and double standards of morals and of physical health for the male and female sexes, that lead directly to the disease and death of many of our women and children; be it

Resolved, That the American Medical Association, through its House of Delegates, hereby presents for the instruction and protection of the lay public the unqualified declaration that illicit sexual intercourse is not only unnecessary to health, but that its direct consequences in terms of infectious disease constitute a grave menace to the physical integrity of the individual and of the nation.

ROBERT N. WILLSON, Secretary Pro Tem.

Report of the Board of Trustees

Dr. M. L. Harris, Chairman of the Board of Trustees, presented the following report:

To the Members of the House of Delegates of the American Medical Association:

The Board of Trustees respectfully returns to the House of Delegates the report of the Committee on Davis Memorial, which was referred to it, for the reason that the committee is a committee of the House of Delegates, and the Board of Trustees has no power to accept resignations of its members, nor to fill vacancies.

M. L. HARRIS, Chairman.

On motion of Dr. Edward Jackson, Colorado, the resignations of the Chairman and Treasurer of the Davis Memorial Committee were accepted, and the President instructed to appoint their successors.

Special Journals to Be Established

Dr. Harris, speaking for the Board of Trustees, said that as is known, there is published at THE JOURNAL office the *Archives of Internal Medicine.* This was done at the request and petition of members of the Section on Practice of Medicine of the American Medical Association, and the Board of Trustees had been petitioned by two other sections to publish similar journals for their benefit, namely, a journal devoted to surgery and a journal devoted to pediatrics. While the Board of Trustees has full authority under the By-Laws to do this, the board would like the approval of the House of Delegates before undertaking the extension of this work. These journals would not interfere in any way with THE JOURNAL of the American Medical Association. They would be journals of an entirely different character. These journals would not be issued immediately, but, as soon as the Association had facilities in its new building, the matter would be taken up.

Dr. Frank Billings, Illinois, moved that the Board of Trustees be empowered, as soon as the printing facilities of the Association would permit, to publish these two special journals.

This motion was seconded by several.

Dr. Edwin Walker, Indiana, moved to amend by adding the words, "provided there shall be no expense to the Association."

The amendment was seconded and accepted.

Dr. C. E. Cantrell, Texas, speaking for the Board of Trustees, said it looked as though these journals would be self-sustaining, and he did not think the House of Delegates should bind the Board of Trustees too closely in beginning the publication of such journals.

Dr. Edwin Walker, Indiana, did not think the Board of Trustees should go into a publishing enterprise which might cause the Association to lose money.

Dr. J. Riddle Goffe, New York City, agreed with Dr. Walker, and said he had found from his experience in medical journalism that medical journals did not pay very well. He thought the Board of Trustees, before entering into such an arrangement, should be guaranteed by the Sections against loss from the publication of these journals.

Dr. M. L. Harris, Illinois, said the Association had not lost anything yet. One of the objects of the Association was to publish things which were for the benefit of the profession, and the Board of Trustees had been asked to do this for the benefit of the profession.

Dr. Mack Rogers, Alabama, asked whether the publication of the *Archives of Internal Medicine* had been a success.

Dr. Harris replied that it had been successful in every way.

Dr. A. T. McCormack, Kentucky, said he had had some experience in medical journalism recently, and those who had been engaged in the practice of medicine for a long time had realized for many years, owing to the varied character of the advertisements carried by most medical journals, and the dangerous character of the advertisers, that financial losses were frequent, because the profession failed to support and appreciate those journals. In recent years many medical journals had not carried those advertisements. These two proposed journals would carry none, and every physician interested in surgery or pediatrics could no more fail to have such journals in their offices than men who were engaged in original research would fail to take the *Archives of Internal Medicine.* For this reason the Board of Trustees should be empowered to publish such medical journals without advertising, if they saw fit to do so. He favored the publication of clean cut, scientific journals of the class under consideration.

Dr. C. R. Woodson, Missouri, then moved as a substitute that the matter be referred to the Board of Trustees, with full power to act.

Seconded.

The President asked Dr. Simmons to speak on the subject. Dr. Simmons said: "There is nothing we can spend our money for to better advantage, if it is necessary, than in putting out the class of literature that is intended by the publication of the two journals mentioned. Those of you who take the *Archives of Internal Medicine* realize that it publishes a class of literature that no private publisher would think of undertaking in the form in which it is published. The Association has now a splendid printing plant and is able to do that work much cheaper than any private publisher could think of doing it. These two proposed journals, one devoted to surgery, and the other to pediatrics, would be high-class in every way. The argument is made that there are no journals, such as the German journals, in the English language that can be regarded as high-class which will publish long and exhaustive scientific articles devoted exclusively to surgical and pediatric subjects. I believe we can do nothing that will help scientific medicine in this country so much as the publication of high-class scientific journals that private publishers cannot publish, even though it may be done at a loss. It is not fair to say that the Trustees shall not start those journals unless they succeed. They will not succeed financially the first few months, and cannot possibly succeed unless payments are demanded in advance and are guaranteed. You cannot expect these journals to pay for the first year, but there is nothing which will help scientific medicine more than the publication of such journals as have been mentioned.

Dr. Edwin Walker withdrew his amendment with the consent of the seconder.

Dr. Woodson then renewed his motion, which was put and carried.

Selection of Los Angeles as Next Meeting Place

Dr. I. C. Chase, Texas, moved that the regular order of business be set aside, and that the House of Delegates proceed immediately to consider the place of meeting for next year.

Seconded and carried unanimously.

Dr. M. L. Harris, Chairman of the Committee on Transportation and Place of Session, said the Committee had received invitations from Atlantic City, N. J.; Chattanooga, Tenn.; Buffalo, N. Y.; Los Angeles, California, and Louisville, Ky., but as there was not a majority of the members of the Committee present, the members present were not able to make any recommendation as to the next place of session, and thought it would be best for the House to decide.

Dr. Alexander R. Craig, Pennsylvania, moved that Los Angeles and Buffalo be placed in nomination, and a ballot taken.

Seconded and carried.

There were 119 votes cast, and of this number Los Angeles received 61, and Buffalo 58.

Los Angeles was declared to be the next place of session.

Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Alexander R. Craig, Pennsylvania, Chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-Laws:

The Reference Committee on Constitution and By-Laws begs leave to submit the following supplementary report:

Since the presentation of its former report, the Committee has received the advice that the suggestion of the establishment of the Committee on Uniform Regulation of Membership originated with the Association of State Secretaries and Editors.

The Reference Committee, therefore, recommend that the Council on Health and Public Instruction be requested to continue the Committee, with such changes in its personnel as will fill the Committee with secretaries of constituent associations.

The Reference Committee considered the resolution offered by Dr. Dowling:

WHEREAS, There are old and distinguished doctors in various
states whose careers have adorned the profession;
Resolved, That those who have been elected to honorary mem-
bership in the component state association shall be entitled to mem-
bership (hon--ry) in this Association on recommendation of the
hous-rns junctus of the component state association, bearing the
president and secretary and the seal of the state
Dr. Simmons s--d the said doctor is a member of the Association
believe it would if not less than 10 years, and has been engaged
There is a great" *not* less than 25 years.
it, and I have rea that this resolution be referred to the
that we are not making Public Instruction.
as we should make. I, mmends that authority be given the
We are all liable to get in nce Committee to renumber chapters
into a rut. Nevertheless, aws. as amended, should that prove
ciation, I will say this, tha t any grammatical or typographic

The Committee further recommends that Article 9, of the Constitution, be amended by striking out of Section 1 "and a treasurer." This amendment awaits the action of the House at the next annual session.

The Committee recommends that the House reconsider the action of this morning, in so far as to enable the change of the title of the Council on Health and Publicity to the title of the Council on Health and Public Instruction.

A. R. CRAIG, Chairman.

On motion, the report was adopted.

Report of the Reference Committee on Reports of Officers

Dr. George W. Guthrie, Pennsylvania, Chairman of the Reference Committee on Reports of Officers, presented the following report:

Your Committee, to which was referred the communication of Dr. Williams, beg to report that commendation of the work of Dr. McCormack was embraced in a previous report of the Committee, advising that the good work go on.

GEORGE W. GUTHRIE, Chairman.

The President stated that no action was necessary on this report.

Report of the Reference Committee on Hygiene and Public Health

Dr. C. S. Sheldon, a member of the Reference Committee on Hygiene and Public Health, read the following report:

To the Members of the House of Delegates of the American Medical Association:

OPTOMETRY DEPRECATED

The Reference Committee on Hygiene and Public Health, to which was referred a recommendation of the Optometry Committee of the Section on Ophthalmology, of last year, which resolutions deprecate the multiplication of optometry boards in the different states, and the appointment of non-medical and unqualified persons thereon, and which resolution further recommends the publication of the history of so-called optometry and optometry colleges, and the dissemination of such information, in regard to these so-called optometry colleges, and especially the furnishing of such information to medical societies and state medical boards, advise that these be approved.

FORM COMMITTEE ON PREVENTION OF BLINDNESS

The Reference Committee on Hygiene and Public Health, to which was referred a resolution of the Section on Ophthalmology, recommending the appointment of a "Committee on the Prevention of Blindness," recommends that the name of the present Committee on Ophthalmia Neonatorum be changed to that of the Committee on the Prevention of Blindness; and that the scope of said committee's work be correspondingly enlarged.

DISCOURAGE SUICIDE PUBLICITY

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of the Section on Preventive Medicine and Public Health, in reference to publication by newspapers of the details of suicide, begs to report that the recommendation contained in the resolution seems, in some respects, inadvisable, at this time, and your Committee recommends the following resolution as a substitute:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that the publication of the details of suicide by newspapers is one of the potent causes of other suicides by the suggestive influence of such published details; and it is, therefore, recommended to the public press that the details of suicide be omitted from publication.

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of the Section on Preventive Medicine and Public Health, which recommends the appointment of a committee to promote instruction in all literary colleges and normal schools on matters of public health, begs to commend the purpose of this resolution, and to recommend that it be referred to the Council on Health and Public Instruction.

VISUAL STANDARDS ADVISED

The Reference Committee on Hygiene and Public Health, to which was referred the resolution of this Section on Ophthalmology, which recommends that the American Medical Association, through its President, shall appoint a committee to confer with the Department of Commerce and Labor, and with the Marine Hospital Service, with a view of "establishing proper visual standards and tests to govern these public servants," recommends that the resolution be approved.

The Reference Committee on Hygiene and Public Health, to which was referred the recommendation of the Section on Ophthalmology for 1909, in reference to the formulation of a curriculum to better equip medical students and practitioners with a knowledge of "infectious diseases of the eye and its refractive defects," respectfully recommend the consideration of the work contemplated by this resolution be referred to the Council on Health and Public Instruction.

Respectfully submitted.
William N. Wishard, Chairman.

On motion the report was adopted.

Report of the Reference Committee on Miscellaneous Business

The following report was presented:

To the Members of the House of Delegates of the American Medical Association:

The Reference Committee on Miscellaneous Business, to which was referred the resolution from Dr. S. S. Crockett, of Tennessee, asking endorsement of the Southern Medical Association as a branch of the American Medical Association, begs to report that while the committee is in sympathy with the request, we suggest, because sufficient data did not accompany the resolution, that this matter be deferred until a more formal application be presented, accompanied by the constitution and by-laws of the petitioning society.

Respectfully submitted.
T. A. Woodruff, Chairman.
Edwin Walker,
Ridgely B. Warfield,
E. A. Hines,
E. J. Goodwin.

On motion, the report was adopted.

Report of Reference Committee on Legislation and Political Action

Dr. J. W. Clemmer, Ohio, Chairman of the Reference Committee on Legislation and Political Action, reported that only one item had been referred to the Committee, and this related to legislation on habit-forming drugs. This is a very important matter, requiring a great deal of time, attention and technical information. For this reason, the Committee recommended that the matter be submitted to the Council on Health and Public Instruction.

On motion, the report was adopted.

Expressions of Thanks

Dr. Hubert Work, Colorado, introduced the following:

The House of Delegates, in behalf of the American Medical Association, desires to express its cordial appreciation and thanks to the Missouri State Medical Society for its hospitality and the cordial welcome extended to the Association in the masterful address of its President and to Dr. Moore;

To His Excellency, Governor Hadley, for his scholarly address, in which he showed himself conversant with and appreciative of the aims, desires and purposes of twentieth century medicine;

To Dr. Dorsett and his Committee on Arrangements;

To Mayor Kreismann for his official courtesies;

To the Committee on Ladies' Entertainment, which contributed so intelligently to the enjoyment of our lady guests;

To the press of the city and thousands of others who have contributed their quota toward the sum total of our happiness while guests in this city.

St. Louis has again demonstrated her world-wide reputation for hospitality to the stranger-guest, a reputation which was established beyond dispute at her World's Fair a few years since.

To the retiring officers of this Association the thanks of the House of Delegates are especially tendered. Their services have been intelligent, earnest, and at all times loyal to the best interests of the Association, to public health and to the elevation of scientific medicine.

This was unanimously adopted by a rising vote.

Dr. Alexander R. Craig moved that a vote of thanks be extended not only to the retiring officers, but to the officers who had conducted the meetings of the House of Delegates with so much impartiality and decorum. Seconded and carried.

Dr. H. G. Wetherill, Colorado, moved that a rising vote of thanks be extended to Dr. W. B. Dorsett, Chairman of the Local Committee on Arrangements. Seconded and carried unanimously.

Dr. Dorsett thanked the members of the House of Delegates for their words of praise and vote of appreciation.

As there was no further business to come before the meeting, on motion, the House of Delegates adjourned *sine die*.

Members of the House of Delegates in Attendance

ALABAMA—3
Mack Rogers.....Birmingham
W. H. Sanders...Montgomery

ARIZONA—1
Wm. V. Whitmore.....Tucson

ARKANSAS—2
E. Carson Hay...Hot Springs
Joseph T. Clegg..Siloam Spgs.

CALIFORNIA—3
H. Bert Ellis....Los Angeles
G. MacGowan....Los Angeles
Jos. L Milton.......Oakland

CANAL ZONE MEDICAL ASSOCIATION—1
W C. Gorgas..........Ancon

COLORADO—2
Edward Jackson.......Denver
Hubert Work..........Pueblo

CONNECTICUT—2
D. Chester Brown....Danbury
E. J. McKnight.....Hartford

DELAWARE—1

DISTRICT OF COLUMBIA—1
W. C. Woodward..Washington

FLORIDA—1

GEORGIA—2
Dunbar Roy ....Atlanta
Thos. D. Coleman....Augusta

HAWAII—1

IDAHO—1

ILLINOIS—9
C S. Bacon.........Chicago
William F. Grinstead...Cairo
E. W. Weis..........Ottawa
J. L. Wiggins..East St. Louis
Stephen C Glidden..Danville
John E. Allaben.....Rockford
Frank Billings........Chicago
W. E. Shallenberger...Canton
A. L. Brittin.........Athens

INDIANA—4
W. N. Wishard...Indianapolis
Edwin Walker .....Evansville
A. C. Kimberlin..Indianapolis
C. H. McCully.....Logansport

IOWA—3
A. L. Wright.........Carroll
D S. Fairchild.......Clinton
H. C. Eschbach........Albia

KANSAS—2
C. C. Goddard...Leavenworth
L. L. Uhls.......Osawatomie

KENTUCKY—4
W W. Richmond.....Clinton
A T. McCormack..........
...........Bowling Green
B. F. Van Meter..Lexington
J. W. Kincaid....Catlettsburg

LOUISIANA—2
Oscar Dowling ...Shreveport
C. Chassaignac..New Orleans

MAINE—1
A. D. Sawyer...Ft. Fairfield

MARYLAND—2
H. H. Young.......Baltimore
Ridgely B. Warfield.Baltimore

MASSACHUSETTS—6
J. B. Blake...........Boston
Horace D. Arnold.....Boston
Homer Gage........Worcester
O. J. Brown....North Adams

MICHIGAN—3
F. W. Robbins........Detroit
E. T. Abrams.....Dollar Bay
Wilfred Haughey.Battle Creek

MINNESOTA—2
Arthur Sweeney.....St. Paul
C. F. McComb........Duluth

MISSISSIPPI—2
J. W. Young........Granada
J. B. Bullitt.......University

MISSOURI—5
E. J. Goodwin......St. Louis
W. B. Dorsett......St. Louis
A. W. McAlester..Kansas City
J. D. Brummall.....Salisbury
C. R. Woodson.....St. Joseph

MONTANA—1
T. D. Tuttle.........Helena

NEBRASKA—2
W. J. Birkofer....Gottenburg
A. R. Mitchell........Lincoln

NEW HAMPSHIRE—1
John Z. Shedd..North Conway

NEVADA—1
O. P. Johnstone........Reno

NEW JERSEY—3
L. M. Halsey..Williamstown
C. R. P. Fisher..Bound Brook
W. F. Ridgway..Atlantic City

NEW MEXICO—1
G. K. Angle......Silver City

NEW YORK—11
J. Riddle Goffe.New York City
W. H. Thornton......Buffalo
V. C. Pedersen.New York City
J. E. Weeks...New York City
D. H. Murray.....Syracuse
John O. Roe.......Rochester
Charles Jewett......Brooklyn
W T. Mulligan.....Rochester
E. H. Bartley......Brooklyn
Chas. Stover......Amsterdam
J. E. Sadlier....Poughkeepsie

NORTH CAROLINA—2

NORTH DAKOTA—1
Victor H. Stickney..Dickinson

OHIO—7
J. H. J. Upham.....Columbus
J. W. Clemmer.....Columbus
J. A. McCullam..Uhrichsville
Robert C. M. Lewis..Marion
E. O. Smith.......Cincinnati
B. H. Blair.........Lebanon

OKLAHOMA—2
L. A. Hahn..........Guthrie
J. A. Walker........Shawnee

OREGON—1
C. J. Smith........Pendleton

PENNSYLVANIA—9
Thomas D. Davis...Pittsburg
W. T. Williams...Mt. Carmel
Samuel Wolfe....Philadelphia
David S. Funk....Harrisburg
A. R. Craig......Philadelphia
G. W. Guthrie...Wilkes Barre
John B. Lowman..Johnstown
Wendell Reber....Philadelphia

PHILIPPINE ISLANDS—1

RHODE ISLAND—1

SOUTH CAROLINA—2
John L. Dawson...Charleston
Edgar A. Hines.......Seneca

SOUTH DAKOTA—1
R. D. Alway........Aberdeen

TENNESSEE—3
L. A. Yarbrough...Covington
S. S. Crockett......Nashville
B. D. Bosworth.....Knoxville

TEXAS—5
E. H. Cary...........Dallas
W. B. Russ......San Antonio
I. C. Chase.......Fort Worth
Frank Paschal...San Antonio

UTAH—1
A. A. Kerr....Salt Lake City

VERMONT—1
J. N. Jenne.......Burlington

VIRGINIA—3
W. E. Anderson....Farmville
J. Shelton Horsley..Richmond
T. C. Firebaugh.Harrisonburg

WASHINGTON—2
C. N. Suttner....Walla Walla

WEST VIRGINIA—2
C. S. Hoffman........Keyser
C. A. Wingerter.....Wheeling

WISCONSIN—3
Karl Doege........Marshfield
C. S. Sheldon.......Madison

WYOMING—1
J. J. Monahan...Encampment

PRACTICE OF MEDICINE—1
Joseph A. Capps.....Chicago

OBSTETRICS AND DISEASES OF WOMEN—1
H. G. Wetherill, Denver, Colo.

SURGERY—1
Edward H. Ochsner...Chicago

OPHTHALMOLOGY—1
Thos. A. Woodruff....Chicago

LARYNGOLOGY AND OTOLOGY—1
D. B. Kyle......Philadelphia

PREVENTIVE MEDICINE AND PUBLIC HEALTH—1
J. H. White..New Orleans, La.

NERVOUS AND MENTAL DISEASES—1
H. H. Hoppe..Cincinnati, O.

STOMATOLOGY—1
G. V. I. Brown...Milwaukee

DISEASES OF CHILDREN—1
Chas. Douglas........Detroit

DERMATOLOGY—1
Wm. Allen Pusey.....Chicago

PHARMACOLOGY AND THERAPEUTICS—1
C. S. N. Hallberg....Chicago

PATHOLOGY AND PHYSIOLOGY—1
W. L. Bierring..Iowa City, Ia.

U. S. P. H. AND M.-H. SERVICE—1
Surgeon G. B. Young..Chicago

U. S. NAVY—1
Surgeon James C. Pryor...
........Washington, D. C.

U. S. ARMY—1
Major M. W. Ireland......
........Washington, D. C.

Addenda

The following reports of committees and officers were omitted because of limitations of space in The Journal, June 11, 1910, pages 1979, 1986, etc., from the report of the second meeting, Monday afternoon, June 6.

Report of the Board of Public Instruction on Medical Subjects

To the Members of the House of Delegates of the American Medical Association:

The report of the Board of Public Instruction is brief. Plans for the systematic institution of a progressive scheme of instruction on topics relating to public health have been held in abeyance until the report is before you of a Committee on the Organization of a Council on Public Health, Publicity and Legislation under the chairmanship of Dr. C. A. L. Reed. The report of this committee will deal with the centralization and coordination of several committees under a specially organized council, which will eliminate the duplication of activities along similar lines as well as greatly reducing the expenditures for this work. The Board of Public Instruction on medical subjects also feels that a central bureau should be a constituent part of the central administration offices of the American Medical Association. From this center matters of great public interest could be disseminated. This board therefore, heartily concurs with the concentration plan to be suggested by the committee under the chairmanship of Dr. Reed.

In deference to the wishes of the Board of Trustees the work of the Board of Public Instruction on Medical Subjects has been held under advisement until this concentration plan shall have been considered and acted on by the House of Delegates. For this reason our program for the past year has been abbreviated. Two popular articles have been prepared and are now in press, one on "The Venereal Peril," the other on "Typhoid Fever." We are pleased to note, however, that there has been a general and most creditable endeavor on the part of several committees appointed by the House of Delegates, as well as that of the state organizations, to place before the lay world many topics of great educational value. Also many timely articles have appeared in the current magazines which have created widespread interest, and in one instance at least a large endowment was created for the study of hookworm disease, thus popularly exploited. Unfortunately, much of the initiative in the great progressive health movements has come from the lay public, the physician occupying the position of an aid rather than an originator.

The recent tendencies, however, for physicians to participate, within ethical bounds, in matters of public interest has been most creditable and we believe that a most optimistic forecast is justifiable as to the progress of this work. Careful organization and systematic endeavor are necessary to bring it to the best issue. Respectfully submitted.

John G. Clark, Chairman.

Report of the Committee on Nomenclature and Classification of Diseases

To the Members of the House of Delegates of the American Medical Association:

Your Committee on Nomenclature and Classification of Diseases beg leave to submit the following report, which, it must be confessed, is hardly more than a report of progress. It seems impossible to do more at present, for at the time of our last report we had reached a point in our work where it was necessary to wait for the revision of the International Classification of Causes of Death. It was confidently expected that the French version would reach the Bureau of the Census last October, but it was not received there until some time in January. Dr. Wilbur, the bureau's chief statistician for vital statistics, at once began the labor of translation, but he encountered points of uncertainty which made it necessary for him to correspond with M. Bertillon; hence further delay. It was not until April 21 that a copy of the translation was received by the undersigned, and it was incumbent on him to return that copy to Dr. Wilbur within a few days. Only during the week which is to end on May 7 did he obtain a copy that he could keep—manifestly too late for him to consult his colleagues with regard to it. This unfortunate delay is in no sense to be imputed to Dr. Wilbur, who, indeed, deserves the thanks of the profession for the excellence of the work which he has produced.

Your committee are more than ever inclined to recommend the adoption of the Bellevue Nomenclature. It was carefully revised about a year ago, and it is now again in process of revision, the numerals of the revised International Classification being assigned to its titles. A Latin list seems necessary in addition, and it is our opinion that, with very slight changes, the excellent list now employed by the Bureau of Medicine and Surgery of the Navy will supply that want. The adjustment, however, will require considerable work. In addition, a list of injuries according to their nature, regardless of the mode of their production (which is all that the International Classification takes cognizance of), will have to be prepared. Respectfully submitted,

Frank P. Foster, Chairman.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

Report of the Director of Post-Graduate Study

To the Members of the House of Delegates of the American Medical Association:

I herewith submit a report of the progress of the work of the course of post-graduate study for the year just closing.

On account of unavoidable delay on the part of the Director, the manuscript for the outline for the third year of the course was somewhat late in getting into the hands of the printer. But with the aid of the efficient assistant to the General Secretary, and of The Journal press, outlines were distributed to the waiting societies the latter part of September. Many of the societies that had taken the preceding year's course, as well as a large number of new societies, were ready to begin active work for the year.

Quite a number of societies begin the year's work the first of the calendar year, just after the election of officers. We noted at that time a rather marked increase in the demand for outlines, many of the new officers trying in this manner to arouse an interest and enthusiasm in their societies.

The Journal press printed two thousand outlines in blank form, the remainder of the supply for the year, four thousand, being the program of the Warren County (Kentucky) Society. The Warren county programs were used again this year, as the experience of the preceding years showed that the plans and purposes of the course of study were more readily understood by those not familiar with the work by using this program than through the outlines in blank form.

The outline for each weekly meeting has been printed in The Journal begining the first of September as was done last year. The value of this is apparent, for many of the requests state that the outline had been seen in The Journal.

Some of the societies that had tried the course the first or second year have given it up on account of the difficulty in getting the members to attend regularly, but on the other hand a very much larger number have taken up the work this year, showing for the year a marked increase in the number of societies. In most societies they also report that a much larger percentage of the members attend regularly the weekly and monthly meetings, indicating that the number of members has increased materially during the year.

The large number of states included in the list of societies shows that the interest in the course is rather widespread, but we are still convinced by the large number of requests coming in from the states and counties visited by Dr. McCormack that the man who knows the work from practical experience is best able to show to others the value of the course of study and arouse in them an interest in it.

One of the general topics for discussion this year is "Pharmacology and Therapeutics." In the program for this month one of the weekly meetings is devoted to a study of the organization, objects and rules of the Council on Pharmacy and Chemistry of the American Medical Association. In the Warren county program we also planned a meeting with the local pharmaceutical society, discussing the Admissions and Rejections to the U. S. P. We have also distributed with the outline the report of the Committee on Revision of the U. S. P., requesting each society to discuss these topics with the druggists. Reference is also made to the publications of The Journal press on these kindred subjects.

We see that in many of the state and private medical journals during the year, and in the meetings of the county secretaries of some of the state societies, the value of a systematic course of study has been discussed. These facts, in addition to the large number of letters received from the secretaries and members of the societies following the course, show the wonderful increase in the interest and enthusiasm in the course of study and its practical application to the needs of a large number of societies both in the smaller towns and in the larger cities.

The outline for the fourth year will be printed and ready for distribution by the first of August, permitting all who desire to begin the work on the last year of the cycle by the first of September.

The very frank statements from a large number of county society officers as to the value of the course of study in bringing doctors together and causing them to adjust in a satisfactory way their little personal differences, in addition to the value in a professional way derived from the actual study and thought given the medical topics, show that this has been by far the most successful year of the course of study.

Very respectfully,
Jno. H. Blackburn, Director.

Report of the Council on the Defense of Medical Research

During the past year the Council on the Defense of Medical Research has in the main been carrying out the program suggested by the work of its first year. This program has consisted in furthering the adoption of rules in medical laboratories, the publication of papers, and the distribution of information regarding the work of the Council and the data collected by it.

The regulations concerning the care of animals in laboratories have now been formally adopted by the faculties of 52 schools, including all of the large institutions, out of 77 schools that have reported the use of animals for experimental purposes. In several states all of the medical laboratories within their borders are now governed by these regulations. It is probable that soon they will be adopted everywhere in laboratories in which animal experimentation is carried on.

During the past year the following papers showing the relations between animal experimentation and practical medicine and surgery have been published in The Journal of the American Medical Association and reprinted as pamphlets for general distribution:

Vaccination and Its Relation to Animal Experimentation. Jay Frank Schamberg.
Animal Experimentation and Tuberculosis. E. L. Trudeau.
The Rôle of Animal Experimentation in the Diagnosis of Disease. M. J. Rosenau.
Animal Experimentation and Cancer. James Ewing.
The Ethics of Animal Experimentation. James Rowland Angell.
Animal Experimentation. The Protection it Affords to Animals Themselves and Its Value to the Live-Stock Industry of the Country. Veranus A. Moore.
The History, Prevalence and Prevention of Rabies and Its Relation to Animal Experimentation. Langdon Frothingham.
The Importance of Animal Experimentation in the Development of Our Knowledge of Dysentery, Cholera and Typhoid Fever. Mark Wyman Richardson.
Animal Experimentation in Relation to Our Knowledge of Secretions, Especially Internal Secretions. S. J. Meltzer.
Animal Experimentation in Relation to Protozoan Tropical Diseases. Harry T. Marshall.
Modern Antiseptic Surgery and the Rôle of Experiment in Its Discovery and Development. W. W. Keen.

Two other papers of general interest, one by Dr. Charles W. Eliot, entitled, "The Fruits of Medical Research with the Aid of Anesthesia and Asepticism," and another by Dr. W. W. Keen, entitled, "What Vivisection Has Done for Humanity," have been reprinted in pamphlet form for general distribution.

The collection of papers given above does not complete the series which the Council has arranged to have published. When the series is finished it will form a unique collection of data which have never been so thoroughly gathered together before. In most instances the statements are the testimony not only of experts in their several fields, but of the original observers to whose work constant reference is made. The scholarly character of the papers assures them, therefore, permanent value. The data thus collected should be serviceable for many years wherever agitation against animal experimentation may arise.

The work of the Council and the information collected in these papers have been given publicity in the daily press. The education of interested people is doubtless the next stage in the effort of the Council to develop an intelligent attitude toward animal experimentation. In this connection the formation of a society of laymen for the promotion of medical research has been discussed; during the coming year such a society will probably be further considered and possibly brought into organization.

Agitation is now most active in the State of New York. The Council has aided in meeting this agitation both by applying methods of publicity and by cooperation of the members of the Council with the New York medical organization. Since a larger number of legislatures meet next year than have met this year the chances are in favor of more attempts at hostile legislation than have this year appeared. The plans of the Council to control animal experimentation within professional lines will do much, it is believed, to offset the demands of the agitators for legislation which provides for meddlesome interference by uninstructed laymen.

W. B. Cannon, Chairman.
Joseph A. Capps,
David L. Edsall,
Simon Flexner,
Harvey Cushing,
Reid Hunt,
Herbert C. Moffitt.

Report of the Committee on Patents and Trade-Marks

To the Members of the House of Delegates of the American Medical Association:

Your Committee, created at the Chicago meeting in 1908 to study the question of process and product patents on materia medica products and the advisability of securing the enactment of a bill to prohibit the patenting of materia medica products and also to prevent the registration of names of medicines as trademarks, reported last year at Atlantic City its conclusions—that the abolition of product patents on materia medica products was impracticable for reasons given in the report. It was recommended, however, that a committee be continued to keep track of legislation on the subject of patents, and if necessary, cooperate with bodies like the American Bar Association who are interested in the improvement of patent laws, and to attempt to secure court decisions against the improper use of names of medicines as trademarks by manufacturers if such action should seem advisable to the Committee and to the Trustees of the Association. In accordance with this recommendation, the original committee was continued.

During the year, your Committee has kept itself informed of measures proposed and introduced in Congress to change the present patent laws, but nothing has developed that has called for action by your Committee. No doubt changes will be proposed in the future, and all legislation on this subject should be carefully watched. This matter, however, is properly the function of the Committee on Legislation and we recommend that this subject in the future be referred to this Committee.

In our report last year, we referred to some of the questions relating to trademarks that are still in a state of confusion in the court decisions. As bearing on the right of manufacturers and owners to retain the use of names of products that have ceased to be brands, one decision of great importance has been rendered by the Supreme Court during the year in the case of Saxlehner versus Wagner, denying the claims of the petitioner to the exclusive use of the name "Hunyadi." The respondents manufacture a bitter water in Cincinnati and label it "W. S. Wagner's Sons Carbonated Artificial Hunyadi, Conforming to Fresenius' Analysis of Hunyadi Janos Springs." The petitioners sought an injunction against the use of "Hunyadi." The Court says that "there was no unfair competition and no fraud. The plaintiff had no patent for the water and the defendants have a right to reproduce it as nearly as they can. They have the right to tell the public what they are doing and to get whatever share they can in the popularity of the water by advertising that they are trying to make the article and think that they succeed. If they do not convey, but on the contrary, exclude the notion that they are selling the plaintiff's goods, it is a strange proposition that when an article has a well-known name that they have not a right to explain by that name what they imitate. By doing so, they are not trying to get the good will of the name but the good will of the goods. Although the application is different, the principle seems to be similar to the rule that when a patent has expired, descriptive words or even an arbitrary or personal name by which it has become known may be used if sufficient precautions are taken to protect the public from being deceived."

It would follow that a mixture whose composition is secret or a product on which the patent has expired could be imitated and described by the use of a name that has become identified with it, provided that the public is not deceived as to origin of the article.

While this decision does not fully cover the important question referred to last year as to the right of the manufacturer to trademark a catchy name which he then tries to identify with his product so that it may become in reality specific, it does show the tendency to the court to prevent any such evasion of the general principles of trademark rulings.

Your committee remains convinced of the correctness of the conclusions presented last year that the evils of trademarked names are to be remedied by the courts rather than by the enactment of new laws. However, it did not seem advisable to the Trustees of the Association that we should take the initiative in a suit for the purpose of getting a decision on these questions and no cases have arisen that have required our cooperation. This work must be done in the future and can properly be left to the Committee on Legislation, or to the Council on Legislation, etc., which has been proposed as a substitute for the present Committee. We therefore recommend that this subject also be so transferred and that the Committee be discharged.

Respectfully submitted,
C. S. Bacon, Chairman,
O. T. Osborne,
A. B. Cooke,
P. M. Jones,
H. C. Wood, Jr.

Report of the Committee on the Davis Memorial Fund

To the Members of the House of Delegates of the American Medical Association:

This is the first time the chairman of your committee ever appeared before a representative body of his profession with a sad heart. Each of the years since the appointment of this committee he has sought to actively interest its members in a project which seemed to him simple, comparatively insignificant and easy of execution. His plan of operation advised was to ask the profession of each state to obtain from its State Society or Association the appropriation of half the sum which seemed sufficient, dependent on the state member of this committee to raise an equal amount by private solicitation. This plan worked so well in his own state that he was encouraged to urge its adoption, especially since in this way every member of the profession in the United States could be considered as sharing in a voluntary offering of remembrance to the great founder of the American Medical Association. For reasons which need not be referred to here, Massachusetts had little sympathy and gave little support to our Association for much the larger part of its existence, yet my plan worked so well that it was easy to secure nearly double the amount of money which was thought to have been her share. For years New York was torn asunder by contentions which made the great body of the profession of the state indifferent to or in opposition to the Association. Yet through the kindly offices of Dr. Bryant and Dr. Wyeth a few members of the profession in New York City gladly contributed five hundred dollars. An equal sum will probably be appropriated by the state organization. Your committee had every right to expect the State of Illinois, and especially the great city of Chicago, the home of the Association and the almost life-long center of Dr. Davis' public activities, would furnish much more than its quota in commemoration of, in many respects, its first citizen. Great as Dr. Davis was as a medical practitioner, teacher and leader in his profession, many have felt that his public services to his city and state warranted the independent action of its citizens in commemorating him in imperishable bronze looking out on the lake, the waters of which, largely through his foresight and energy, have been given in ample and permanent supply to the thirsty city. It was supposed easy to raise $15,000 in Chicago alone for this purpose. Your treasurer will tell you that beside his own generous gift, that of Dr. Quine, and the Davis Memorial Service Fund, almost nothing has been done where most was expected.

The first year that your committee was appointed was marked by the unprecedented disaster to the great city of San Francisco, and it was felt that every effort should be made by our profession to relieve its suffering. Although very many wealthy members of our profession in San Francisco were utterly ruined financially, they, for the most part, heroically refused assistance, and the $5,000 voted by our Association for this purpose was refused with thanks. The last contribution received for the Davis memorial was from Dr. R. F. Rooney, member of our committee from California, in the sum of $130, regretting that this amount was so little, owing to the great calamity which had befallen them. Dr. Anders, member of our committee from Pennsylvania, makes report of progress with a contribution of about $400. Dr. Jepson of Iowa reports that his state society this year proposes to contribute $300. At the last meeting of the Association it was voted to furnish $5,000 of a total of $25,000.

At the beginning of this year I asked for a renewed effort of our committee to finish the work so long delayed. I reinforced the appeal by writing to each one of the presidents of the state societies and associations for a cooperative effort, with the request that all the funds so raised should be sent directly to our treasurer and not to me. I have asked Dr. Billings for a statement to be incorporated in this report, which is appended.

I must confess to a great disappointment. No man could present a more worthy object, not so much for the solicitation of funds as the request for the privilege extended to a great profession of making a public recognition of its really great and worthy founder. This no one questions. Again, no one holds more highly than myself the honor and generous attributes of the medical profession, which largely under the leadership of Dr. Davis' co-association work has placed America in the acknowledged front rank of medical attainment in the world. The medical journal of this Association, largely established by Dr. Davis' untiring effort, who without compensation for years was its first editor, is the acknowledged leader in national and international medical journalism.

A brief analysis of our treasurer's report shows that only six states have made contribution to the fund. This House of Delegates, representatives of all the states, subscribers to the *Journal*, numbering over fifty thousand, the great army of our profession which is in excess of one hundred thousand in the United States—all know that this neglect is little less than a disgrace.

The inevitable conclusion to which the chairman of your committee has arrived is that, notwithstanding his persistent and continued efforts, he is unfitted for the position to which you elected him and in which he has gladly served. He recognizes that it would have been far more fitting to have had the initiating of the movement arise in the great city which Dr. Davis so well represented. He regretfully tenders to you his resignation with the request that some leading member of the profession in Chicago may be carefully selected to complete the work which in his hands has been, if not a failure, a bitter disappointment.

REPORT OF THE TREASURER OF THE N. S. DAVIS MEMORIAL FUND

Frank Billings, Treasurer

Aug. 1, 1906—Amount deposited in the Northern Trust Company Savings Department		$ 192.50
Interest at 3 per cent. to Jan. 1, 1907		2.40
Interest at 3 per cent. to July 1, 1907		2.91
July 1, 1907—Deposited following contributions:		
Henry O. Marsh, Sherman, Tex		100.00
J. M. Anders, Philadelphia, Pa		165.84
Philip Mills Jones, California		5.00
Aug. 3, 1907—Deposited:		
R. C. Cabot, Boston		10.00
Treasurer of Massachusetts Medical Society		300.00
H. L. Burrell		25.00
James B. Ayer		10.00
C. J. Blake		10.00
Thomas E. Cunningham		10.00
Joel E. Goldthwaite		10.00
F. B. Harrington		10.00
J. J. Putnam		10.00
M. H. Richardson		10.00
F. C. Shattuck		10.00
Edward H. Stevens		10 00
J. C. Warren		10.00
J. A. Gordon		5.00
R. W. Lovett		5.00
J. E. Somers		5.00
A. O. Squier		5.00
Theobald Smith		5.00
George B. Shattuck		5.00
W. D. Swan		2.00
E. G. Cutler		5.00
A. P. Clark		5.00
A. T. Cabot		5.00
J. C. Monroe		10.00
George G. Monks		10.00
Henry O. Marcy		100.00
Morton Prince		5.00
Aug. 6, 1907—Balance from the Chicago Davis Memorial Service Fund		367.00
Sept. 4, 1907—W. G. Mixter		5.00
Interest at 3 per cent. to Jan. 1, 1908		17.84
May 14, 1908—Dr. W. E. Quine		100.00
Texas State Medical Association		17.75
May 29, 1908—Joseph D. Bryant		250.00
May 30, 1908—J. M. Anders		223.47
June 1, 1908—Frank Billings		100.00
Interest at 3 per cent. to July 1, 1908		23.70
July 11, 1908—Dr. John Wyeth		250.00
Contributed by:		
W. M. Brickner	$ 3.00	
F. Tilden Brown	15.00	
F. E. Beal	5.00	
H. S. Houghton	5.00	
H. Heiman	5.00	
H. J. Boldt	10.00	
I Adler	15.00	
W. Meyer	25.00	
J. E. Janvrin	5.00	
W. H. Luckett	5.00	
W. Van V. Hayes	5.00	
J. A. Bodine	5.00	
C. H. Chetwood	5.00	
Robert Abbe	20.00	
A. E. Davis	5.00	
J. A. Fordyce	25.00	
R. T. Morris	5.00	
Edwin Beer	5.00	
J. J. McPhee	5.00	
H. Holbrook Curtis	5.00	
Dr. Alfred Meyer	5.00	
Total	$183.00	
To balance	67.00	
Check	$250.00	
Interest at 3 per cent. to Jan. 1, 1909		32.70
Interest at 3 per cent. to July 1, 1909		33.19
Sept. 17, 1909—J. M. Anders		7.59
Interest at 3 per cent. to Jan. 1, 1910		37.46
May 12, 1910—Deposited		130.00
May 12, 1910—Oklahoma State Medical Society		100.00
Total		$2,771.35

The following letter is herewith transmitted to the House of Delegates:

Dr. Henry O. Marcy, May 1[illegible] 1910.

Chairman of the Davis Memorial Fund, Boston, Mass.

Dear Sir:—I herewith present you, as chairman of the Davis Memorial Fund, my resignation as treasurer. I desire my resignation to take effect at the time of the meeting of the American Medical Association at St. Louis in June. I shall be ready to transfer the fund of the memorial to my successor as soon as he shall have been elected.

Very truly yours,

Frank Billings.

Respectfully submitted.

Henry O. Marcy,
Chairman.

May 10, 1910.

Report of the Committee on Insignia

To the Members of the House of Delegates of the American Medical Association:

Your special committee which was instructed at the Atlantic City meeting in June, 1909, to devise a suitable insignia for the Association to take the place of the present one, begs leave to submit the following report:

1. It is perfectly apparent that it is desirable, if not necessary, to change the present insignia which contains a Red Cross. In 1906, representatives from the different civilized governments of the world met at Geneva for the purpose of amending the original article of the Geneva Convention for the amelioration of the condition of the wounded in the armies in the field. The United States was represented at this convention and is one of the signatory powers.

Article 27 of this Convention provides that "the signatory powers whose legislation may not now be adequate engage to take or recommend to their legislatures such measures as may be necessary to prevent the use, by private persons or by societies other than those upon which this convention confers the right thereto, of the emblem or name of the Red Cross or Geneva Cross, particularly for commercial purposes by means of trademarks or commercial labels."

There is no law in the United States under which an organization which was using the Red Cross as an insignia can be compelled to discard it, but it is believed that this powerful organization should be one of the first to assist the government in carrying out its obligations. It is also believed that any action this Association may take in discarding the Red Cross in conformity to the 1906 Geneva Convention will be a powerful factor in encouraging other organizations to do likewise. During the present session of congress a bill was introduced, and will probably become a law, attaching a penalty to any unauthorized organization using the Red Cross. While a paragraph may be inserted in this bill exempting organizations from its penalty which used this insignia prior to 1906, it is hardly believed the American Medical Association desires to avail itself of this section.

2. In getting up a new insignia your committee believes that it should convey a definite meaning both in colors and design. It was easy to determine that Scarlet and Gold have been the medical colors since ancient times. and your committee is in harmony that these colors should be the basic ones of the insignia.

3. It was also determined by your committee that the true ancestral symbol of the healing art is the Knotty Rod and serpent of Æsculapius.

4. There has been some disagreement by the members of your committee in assembling the Knotty Rod and serpent and Scarlet and Gold colors into a suitable insignia. One member of the committee, Dr. Cantrell, believes that the Eagle should play an important part in this insignia, while the other four members of the committee, Drs. Gerhard, Wolfe, Taneyhill and Ireland, believe that the insignia should be constructed without the Eagle.

Samples of both designs have been distributed and the question of deciding which shall be adopted is left to the members of the House of Delegates with the recommendation of the majority of the committee that the insignia without the Eagle be accepted.

M. W. Ireland,
G. Lane Taneyhill,
Samuel Wolfe,
Samuel P. Gerhard,
C. E. Cantrell.

Report of the Committee on Relief Fund and Tuberculosis Sanatorium for Physicians

To the Members of the House of Delegates of the American Medical Association:

The profession of medicine exists to assist those who need the help of others; and to conserve whatever of comfort and usefulness is possible for impaired lives. Now that those engaged in each craft or profession generally acknowledge the tie of a common occupation as binding them to organizations for the assistance of their less fortunate comrades, it is appropriate that the American Medical Association should carefully consider what can be done for the unfortunate and disabled members of the medical profession.

At a time when the whole people is being aroused to a campaign against tuberculosis, it is also proper that the American Medical Association consider with care what may be done to help the recovery of physicians stricken with this disease; to remove even a suspicion of danger that the diseased physician may be a carrier of the disease, and to establish a center for *investigation* and education with regard to tuberculosis that may make the whole profession more efficient in its warfare against this plague. Your Committee therefore asks the careful attention of the House of Delegates, and of the Association at large, to the questions it has been considering.

To secure such data as were available to throw light on the existing situation with regard to the relief of indigent and disabled members of the profession, and those dependent on them, and to collect data regarding the prevalence of tuberculosis in the profession, the following circular letter was sent to each state medical society, and to the medical journals published by such societies:

To the Secretary of Each State and County Medical Society, and Other Interested Members: At the last meeting of the American Medical Association at Atlantic City the following report of the Committee on Miscellaneous Business was adopted:

"The committee recommends that the President of this Association appoint a committee of five members to inquire into the desirability and practicability of establishing under the auspices of the American Medical Association a fund for the assistance of physicians disabled by sickness, and for a sanatorium for the treatment of such members of the Association as may be afflicted with tuberculosis or similar diseases; such committee to report to the House of Delegates at the next annual meeting of the Association."

As basis for wise action the committee urges that the officers of state and county medical societies, and others interested in the subject, should at the earliest possible date forward to the secretary of the [illegible] Dr. A. C. Magruder, Colorado Springs, Colo., answers [illegible] es, with some account of any special cases th[illegible] the special need for provision for disabled members of our profession:

1. Is there any provision by your state medical society, or local society, for the care of destitute and disabled physicians and those dependent on them? If so, how is such care provided?

2. What number of instances of special need for such assistance (or sanatorium treatment), have arisen in your locality within the last five years, and what number of your members need such assistance now?

3. About how many members of your county medical society are at present afflicted with tuberculosis or similar diseases; or have, within the last five years, died or withdrawn from professional work on account of such disease?

It is earnestly requested that this matter be brought before each county and state society at its next regular meeting, and that the desired information be furnished our committee at the earliest possible date.

Compared with the number of state and county medical societies the number of replies has been meager, but they represent 17 states scattered in all parts of the country from Massachusetts to Nevada, and from North Dakota to Texas. They include such information as is obtainable from the local organizations in our largest cities, as well as reports from some of the small county societies of country districts. While, with longer time at our disposal, a larger correspondence might have secured a greater mass of material, it is not likely that this would have given a different, or much more definite, impression with reference to existing conditions than is now available. As has been pointed out by some of our correspondents, there exist no records on which complete returns could be based.

From the data now at our disposal it appears: Except in three of our largest cities there are no organizations anywhere in this country to care for destitute and disabled physicians and those dependent on them; or which have at their disposal permanent funds devoted to that purpose.

In the cities alluded to the organizations, which have been in existence for periods of thirty to fifty years, have accumulated considerable funds, the interest of which is fully employed in affording the relief for which the associations were organized. One of these has invested funds amounting to $30,000, and has given assistance to fourteen beneficiaries and two annuitants. In one case the assistance given the widow of a physician amounted to $200 per year for fifteen years.

The replies from several isolated localities show that cases of need, so urgent as to appeal strongly to the sympathies of colleagues of the local profession, occur in every part of the country. The average is about four reported instances to each ten county societies.

The responses to the third question of the committee show, after excluding parts of the country sought for the climatic treatment of tuberculosis, that in ten county societies seven instances of tuberculosis are reported as now existing, or known to have occurred in the recent past, among the members. But it should be noted that none of the larger county medical societies attempts to answer this question. The statement is made that no data exist on which an intelligent answer could be based.

As bearing upon the frequency of tuberculosis among physicians, the secretary of your committee recently attempted to ascertain the number of physicians who had come to Colorado on account of tuberculosis. Of 504 who replied to his inquiries 86, or over 17 per cent., had removed to that state on account of tuberculosis affecting themselves. Inquiry of three of the larger sanatoriums in Colorado, which are under strictly medical control, showed that among 2,391 male patients treated for tuberculosis, 31 were physicians, or one in every 77.

If we take the conservative estimate of one in every 350 physicians incapacitated for their work by tuberculosis, it would appear that there are constantly 100 of our members who need the help of a sanatorium. They would have an increased chance for recovery, an improved expectation of life by sanatorium treatment under the best climatic conditions. And in the total medical profession of the country there would be about 300.

The prolonged course of tuberculosis, the delusive hope cherished by consumptives of a speedy restoration, the tendency to premature confidence, taking beginning improvement for practically complete cure, the demoralizing influence of self-treatment on most physicians affected with this disease, make it extremely important that the physician stricken with tuberculosis should have the opportunity and the discipline of a sanatorium, supported and administered by the medical profession. And this need is quite irrespective of the ability of the patient to pay for his care and maintenance.

In the great cities or among the scattered population of remote country districts, wherever men suffer from the accidents of mines or machinery, or women face the ordeal of childbirth; wherever accident, epidemic influence, or the unfavorable conditions of daily life entail mutilation, suffering, illness and death, are members of our profession, giving their first thought and their best effort to the assistance of the sick, rather than to provision for the emergencies which may overtake themselves.

If altruism, the broader application of a spirit of brotherhood, have any worthy place in the life of a civilized people, it is in providing for those stricken by accident or disease in the performance of their duty; who have been too much engrossed in taking care of others to provide for themselves. We encounter no finer characters than are sometimes found among physicians of good ability, complete training, and great industry, who have given their best efforts to help those who could do little or nothing in return, and persisted in them until the helper could no longer help. The medical profession can ill afford to neglect those whose character gives it the highest standing in the eyes of the world. The public can ill afford to ignore the claims of those who wear themselves out, or die, in its service—who do what is to be done without first stopping to demand security for compensation. To pension the soldier, the fireman, the teacher, the faithful servant of the corporation, and neglect the physician would show a low sense of the relative value of faithful services rendered.

We are convinced that if a responsible, widely-known, representative organization will undertake the care and administration of funds collected for this purpose, little difficulty will be found in obtaining from the more fortunate members of the profession, and from grateful patients and liberal laymen, all the money necessary for the relief of the comparatively few medical men rendered unable to meet the more severe emergencies of life. It is clear that the instances in which the physician must depend on financial assistance from others are so exceptional that in large parts of our country permanent funds for meeting these emergencies cannot be established and kept up, either by the local profession or the county or state medical societies.

What is needed is a central fund by which the needy physician in any locality can be afforded relief. The relief can be given through a local relief organization, or a county medical society, and safeguarded by requiring that a certain percentage of the amount expended shall be raised by the local medical organization. But many localities, many state societies, cannot establish relief funds; and no state society can guarantee the permanence and proper administration of such a fund so well as can the American Medical Association. The sanatorium care of the tuberculous is also impracticable for isolated local or state medical societies. It can best be carried out under the most favorable climatic conditions, where the extent of country served will give a comparatively constant number of patients.

We therefore recommend: That the House of Delegates authorize the appointment of a committee with adequate appropriation for the performance of its duty, to draw up and report to the House, a plan for the organization of a corporate body to receive and administer funds for the relief of physicians disabled by disease, or accident, or those dependent on them; and to establish a sanatorium for the treatment of physicians suffering from tuberculosis; such plan to conform in a general way to the following:

A. A majority of its governing body (trustees) to be chosen by the American Medical Association, a portion each year for overlapping terms. A minority of the governing body may be chosen by contributors to the funds.

B. The income should be derived from funds entrusted to the corporation for that purpose, rather than by a fixed tax on the members of the American Medical Association.

C. The funds to be expended with the cooperation of local organizations, under sufficient guarantee and on proper vouchers.

D. A sanatorium to be established for the treatment of physicians afflicted with tuberculosis where those able to pay for such treatment will be expected to do so; but where those unable to pay for it shall receive the same assistance.

E. Such sanatorium to be situated where favorable climatic conditions prevail, and equipped for the thorough scientific study and treatment of tuberculosis and allied diseases.

Edward Jackson, Chairman,
Jefferson R. Kean,
A. T. Bristow,
H. B. Ellis,
A. C. Magruder, Secretary.

Report of the Committee on Uniform Regulation of Membership

To the Members of the House of Delegates of the American Medical Association:

This committee was created at the Chicago meeting in accordance with a recommendation made by the General Secretary. At the Atlantic City Session in 1909, the committee presented a lenthy report consisting mainly of tabulated data regarding the regulation of membership in the various state associations. The committee recommended that all of the state associations be requested to make their fiscal year conform to the calendar year and to request their component county societies to adopt the same rule, that the committee be continued, that it be increased by the addition of four state secretaries and that it be instructed to continue its work of securing uniform regulation of membership by county and state societies.

The House of Delegates in addition to the work originally assigned to this committee, also referred to it the resolution of Dr. W. H. Sanders of Alabama, regarding the revision of the constitution and by-laws and instructed the committee to report to the House of Delegates in 1910 such amendments as it might deem advisable. In addition, the question of uniform regulations for the disciplining of members was also referred to the committee. We therefore beg to submit the following report, which is presented in three sections:

(1.) Recommendations for amendments to the constitution and by-laws.

(2.) Recommendations for amendments to the model constitution and by-laws for county and state societies regarding the disciplining of members.

(3.) Additional material, discussion and recommendations regarding the uniform regulation of membership.

I

RECOMMENDATIONS FOR CHANGES IN THE CONSTITUTION AND BY-LAWS OF THE AMERICAN MEDICAL ASSOCIATION

CONSTITUTION

Article 4.—Constituent Associations

Amend present article to read as follows:

State and territorial medical associations which have or which hereafter may become organized in accordance with the general plan of organization of the American Medical Association, and which have declared by resolution their allegiance to the said American Medical Association, and which shall agree with other state and territorial medical associations to the formation and perpetuation of the House of Delegates of the American Medical Association, shall be recognized as constituent associations on presentation of evidence that they have complied with the above conditions and on acceptance of their application for recognition by the House of Delegates.

Article 5.—House of Delegates

Second sentence to be amended to read as follows:

It shall consist of delegates elected by the constituent associations and by the Scientific Sections of the American Medical Association, and appointed from the medical departments of the Army, Navy, and from the United States Public Health and Marine-Hospital Service, etc.

Article 12.—Amendments

Amend to read:

The House of Delegates may amend any article of this constitution at any annual session, provided that the proposed amendment shall not be acted on until the annual session next following that at which it was introduced and providing that three-fourths of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

BY-LAWS

Amend chapters 1, 2 and 3 to read as follows:

Chapter 1.—Membership

Section 1.—Classes of members.—There shall be four classes of members: Regular members, associate members, ex-officio members, and honorary members.

Sec. 2.—Regular members.—Any physician reported as a member in good standing of the state association and of the constituent association of the state in which he resides by the secretary, who shall make application on the prescribed form and who shall pay the annual dues and the subscription to The Journal of the American Medical Association for the current year shall be entered as a member.

Sec. 3.—Tenure of Membership.—Regular membership in this Asssociation shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the general secretary shall be officially informed by the secretary of the constituent association of the state in which a member resides that he is not in good standing the general secretary shall remove his name from the membership roll of the American Medical Association and shall notify him of the action taken, together with the reason therefor. It shall be the duty of every member of this Association to maintain his good standing as a member of the constituent association of the state in which he resides in accordance with the by-laws thereof.

Sec. 4.—Removal of Members.—A member removing from one state to another shall become a member of the constituent association of the state to which he removes within one year after his removal. He shall retain his membership in the constituent association of the state from which he removes until he has acquired membership in the constituent association of the state to which he removes. Failing to comply with either of these requirements, he shall be dropped from the roll of members of this Asssociation.

Sec. 5.—Delinquency.—Any member who fails to pay his annual dues and the subscription to The Journal for one year shall be dropped from the roll of members, provided due notice from the general secretary shall be previously mailed to the last known address of the member.

Sec. 6.—Reinstatement.—Any member dropped for either non-membership in his state association or for non-payment of dues shall, if he desires reinstatement, comply with the provisions of Section 1 of this Chapter, the same as a new applicant, except that members dropped for non-payment of dues, and who apply for reinstatement within one year, may be reinstated by paying all indebtedness, including dues and the subscription to The Journal for the current year.

Sec. 7.—Associate Members.—The following shall be eligible to associate membership: Teachers of sciences allied to medicine; physicians engaged in teaching or laboratory work, not eligible to regular membership; dentists holding the degree of D.D.S. who are members of state or local dental societies; pharmacists who are active members of the American Pharmaceutical Association. Associate membership shall be limited to residents of the United States.

Sec. 8.—Election of Associate Members.—Applications for associate membership shall be endorsed by the officers of a section and approved by the same section. The application shall then be sent to the general secretary for confirmation by the House of Delegates. Applications from dentists shall be referred to the Section on Stomatology; applications from pharmacists shall be referred to the Section on Pharmacology and Therapeutics. Associate members shall have the same privileges and be subject to the same conditions as regular members. The general secretary shall, between annual sessions, accept applications for associate membership endorsed by the chairman and secretary of the section through which application is made such acceptance to be subject to confirmation by the House of Delegates at the annual session following.

Sec. 9.—Ex-Officio Members.—Commissioned medical officers of the United States Army, United States Navy and the United States Public Health and Marine-Hospital Service shall be ex-officio members of this Association so long as they retain their connection with their respective services. Resignation or dismissal from the service shall be equivalent to resignation of membership in this Association. Ex-officio members shall not be required to pay dues and shall not receive THE JOURNAL of the American Medical Association except by personal subscription.

Sec. 10.—Honorary Members.—Physicians of foreign countries may be elected as honorary members by the House of Delegates on nomination of a section. Nominations from sections shall be submitted to the House of Delegates on the afternoon of the second day of the annual session. Not more than three honorary members shall be elected in any one year.

Sec. 11.—Invited Guests.—Teachers, students of sciences allied to medicine and distinguished physicians of foreign countries may be invited by the general officers or by the officers of a section to attend an annual session and to take part in the scientific work. They shall be designated as invited guests and shall hold their connection with this Association until the close of the annual session to which they are invited. They shall be entitled to participate in the scientific and social functions of the Association.

Sec. 12.—Members from Foreign Countries.—The House of Delegates may provide for membership under proper restriction from the members of recognized medical societies of foreign countries.

Chapter II.—Registration

Section 1.—No member shall take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office and has paid all dues and subscriptions for the current year.

Sec. 2.—Section Affiliation.—A member on registering shall designate the section in which he wishes to be enrolled, but no member shall register in more than one section at any annual session.

Chapter IV.—Qualifications. Term, Apportionment and Registration of Delegates

Section 2 to read as follows:

Delegates Elected for Two Years.—Delegates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect their representatives so that one-half, as near as may be, shall be elected each year. Delegates elected by the sections or appointed from the United States Army, Navy and United States Public Health and Marine-Hospital Service shall hold office for one year.

Sec. 3.—Apportionment of Delegates.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the president and the general secretary shall be members. This committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 2, of the Constitution, and in proportion to the membership of each constituent association on April 1 of the year in which the apportionment is made as shown by the certificates of membership submitted by the secretaries of the constituent state associations. This apportionment shall take effect at the annual session next succeeding that at which the apportionment is made and shall prevail until the next triennial apportionment whether the membership of the constituent associations shall increase or decrease.

Sec. 4.—Registration of Delegates.—Each delegate from a constituent association before being seated shall deposit with the Committee on Credentials a certificate signed by the president and secretary of his constituent association stating that he has been legally and regularly elected a delegate to the American Medical Association for a definitely stated term. Each delegate from a section shall present credentials signed by the chairman and the secretary of the section which he represents. The delegates from the government services shall present credentials from the surgeon-general of the department which he represents.

Sec. 5.—A Delegate Once Seated to Retain His Seat for the Entire Session.—The credentials of a delegate having been accepted by the credentials committee and his name placed on the roll of the house, he shall remain as the duly accredited delegate of the body which he represents until final adjournment of the session and his place shall not be taken by any other delegate or alternate.

Chapter V.—Procedure of House of Delegates

Sec. 2.—Limit of Time for Introduction of New Business.—No new business shall be introduced into the House of Delegates after the third day of the annual session, unless with unanimous consent; and such new business, whether in the form of a motion, a resolution, a memorial, or otherwise, shall require the unanimous vote for adoption.

Chapter VI.—Meetings of the House of Delegates

Sec. 2.—Special Sessions.—Special sessions of the House of Delegates shall be called by the president on a written request of 27 members of the last House of Delegates, provided that they represent the majority of the constituent associations. When a special session is called by the president the general secretary shall mail a written or printed notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting, and, in general terms, the object of such special session. No other business shall be transacted at the special session than that specified in the call.

Chapter VII.—Nomination, Election and Installation of Officers, Trustees, Associate and Honorary Members

Section 1.—Nominations.—Nominations for office shall be made orally, but no nominating speech shall exceed two minutes in length. The treasurer shall be nominated by the board of trustees.

Sec. 2.—Method of Holding Elections.—All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of the votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Sec. 4.—Associate and Honorary Members.—Nominations for associate and honorary membership from the sections shall be referred without debate to the Committee on Sections and Section Work, which shall report its recommendations to the House of Delegates. The election of associate and honorary members shall immediately follow the election of officers.

Sec. 5.—Installation.—The general officers of the Association, except the president, shall assume their duties at the close of the last meeting of the annual session at which they are elected.

Chapter VIII.—Duties of Officers

Section 1.—President.—The president shall preside at the general meeting and at the meetings of the House of Delegates, and shall perform such duties as custom and parliamentary usage require. On the morning of the first day of the annual session following his election he shall deliver an address at the general meeting not exceeding forty minutes in length on such matters as he may deem of importance to the Association. He may at any time make suggestions in writing to the House of Delegates or to any special or standing committee.

Sec. 3.—General Secretary.—The general secretary shall give due notice of the time and place of all annual and special sessions of the Association and of the House of Delegates in THE JOURNAL of the American Medical Association. He shall send an official notice of each annual or special session to the secretary of each constituent association and to the secretary of each section. He shall keep the minutes of the House of Delegates. He shall notify members of committees of their appointment and of the duties assigned to them. He shall verify the credentials of the members of the House of Delegates and shall provide a registration book in which shall be recorded the name of each delegate in attendance at each session, together with that of the association, government service or section which he represents. He shall prepare a roll of the delegates attending each session to facilitate voting by roll-call. He shall prepare for publication the official program of each session, and shall perform such other duties as pertain to his office or as may be directed by the House of Delegates or the board of trustees. The general secretary's salary shall be fixed by the board of trustees.

Chapter IX.—Board of Trustees

Sec. 2.—Trustees to Control Sessions.—Last two sentences of the section to read as follows: It shall also have control of all exhibits. The board of trustees, in its discretion, may appoint a local committee of arrangements, which shall be at all times under the control of the board of trustees.

Chapter X.—Committees

Section 1.—Classification of Committees.—Amend by adding to the section the following: In case of vacancies in committees occurring during the interval between annual sessions the president shall have the power to appoint members to fill the vacancies until the next annual session.

Sec. 2.—Membership of Committees.—Reference committees shall be appointed by the president from among the members of the House of Delegates............etc.

Sec. 3.—Standing Committees.—Amend to read as follows: Standing committees shall be the following:

(a) Committee (or Council) on Medical Legislation.
(b) Council on Medical Education.
(c) Committee on Transportation and Place of Session.

Strike out section 4.—Judicial Council.

Sec. 5.—Committee on Medical Legislation to become Sec. 4 and to be replaced by new Section to be reported by the Committee on Reorganization of Standing Committees.

Sec. 7.—Council on Medical Education—to become Sec. 5.

Sec. 6.—Committee on Transportation and Place of Session to remain unchanged.

Present Section 8 to be stricken out.

Present Section 9—Reports of Standing Committees—to become Section 7 and to read as follows:

Sec. 7.—Reports of Standing Committees—Reports of Standing Comittees shall, so far as possible, be transmitted 30 days before the annual session to the General Secretary who shall have them printed for distribution to the members of the House of Delegates.

Present Section 10 to become Section 8.

Present Section 11 to become Section 9. Last sentence to be amended to read: These committees shall serve during the session at which they are appointed.

Page 24, paragraph 6, to read as follows: A Committee on Amendments to the Constitution and By-Laws to which shall be referred all proposed amendments to the constitution and by-laws.

Paragraph 9 to read as follows: A Committee on Miscellaneous Business to which shall be referred all business not otherwise provided for.

Sec. 10.—Appeals from Decisions of State Associations.—Questions involving the ethical conduct or the membership rights of individual members shall be considered by the House of Delegates only on an appeal from the decision of the constituent association and then only in case some portion of the constitution of this Association is involved; except that in case of a dispute between two or more constituent state associations, the House of Delegates of the American Medical Association shall have original jurisdiction. Appeals from members, or protests, or complaints from constituent associations shall be referred without debate to a special committee of five selected by the House of Delegates, no member of which shall be a delegate from the constituent state association interested in the case. The Committee shall consider the case, giving at least twenty-four hours' notice of the time and place of the hearing to all the parties involved. The Committee shall report its findings and recommendations to the House of Delegates which shall consider the report in Committee of the whole House. Vote on the adoption of the report of the Committee shall be by ballot and the decision of the House of Delegates shall be final.

Chapter XII.—Sections

Sec. 2, page 26.—Officers of Sections.—The third sentence to be amended to read as follows: Each Section shall also elect annually one delegate and one alternate to the House of Delegates of the American Medical Association to serve one year.

Sec. 3, page 27.—Election of Officers.—The first sentence to be amended to read as follows: The election of officers shall be the first order of business of the morning meeting of the Section on the third day of each annual session.

Sec. 5, page 28.—Executive Committee.—Second and third sentences to read as follows: In case of absence from a session of a member of the executive committee, the vacancy shall be filled by the chairman. The executive committee shall examine and pass on all papers.....................etc.

Sec. 6.—Meetings.—Strike out everything after the word "decide."

Sec. 7.—Who May Take Part in Section Work.—Section to read as follows: The right to present papers before a Section, to take part in its discussions and to participate in its business and scientific deliberations shall be limited to members.

Sec. 9, page 29.—Time at Which Titles Must Be In.—Titles of papers to be presented to the Section must be in the hands of the Secretary of the Section at least thirty-five days before the first day of the annual session. With the title, the writer shall submit an abstract of the paper not less than thirty or more than one hundred and fifty words in length and an estimate of the time required to read his paper.

Sec. 12.—Can Present Papers Before Only Two Sections.—Amend to read as follows: No member shall have the right to present a paper or papers before more than two Sections at any annual session. When more than one Section is to be addressed, the titles and abstracts of both papers must be submitted to the secretaries of both the Sections before which the papers are to be read.

Chapter XIII.—Publication.

Sec. 2.—Papers Must be Ready for Publication.—Page 30 to read as follows: Each author shall hand his paper to the secretary of the Section immediately after it is read. The secretary shall endorse thereon that it has been read and shall hand it to the chairman of the executive committee. All papers approved by the executive committee shall be returned to the secretary of the Section who shall at once forward them to the editor of The Journal.

Chapter XVI.—Amendments to the By-Laws

Page 32 to read as follows: These by-laws may be amended by a three-fourths vote of the House of Delegates, provided that no amendment shall be acted on until the day following that on which it is introduced, except that the Board of Trustees may, by unanimous vote, make such changes and such changes only in the By-laws as may be required to adapt them to the rules and regulations of the United States postal authorities.

II

RECOMMENDATIONS REGARDING AMENDMENTS TO THE CONSTITUTION AND BY-LAWS OF COUNTY, STATE, AND AMERICAN MEDICAL ASSOCIATIONS, COVERING THE DISCIPLINING OF MEMBERS

COUNTY SOCIETIES

Amendment to take the place of Section 7, Chapter 1, page 7, model constitution and by-laws for county societies:

Sec. 7.—A member who is guilty of a criminal offense or of gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges of any of the above offenses or of unethical or unprofessional conduct may be preferred by any member against any other member. Such charges shall be made in writing and shall specify the exact nature of the offense charged, as well as the time, place and circumstances of the offense. Written charges and specifications shall be filed with the secretary of the county society to which the member accused belongs within two years of the date of the offense charged. Specifications and names of witnesses to be summoned shall be filed with the charges which shall be signed by the member making the charges.

On receipt of properly prepared charges against a member, the secretary shall immediately transmit them to the chairman of the Board of Censors and shall at the same time furnish a copy of the charges to the accused. The Board of Censors shall set a time for hearing the charges of which due notice shall be sent both to the accuser and to the accused but no hearing shall be held nor any action taken by the Board of Censors within ten days of the presentation of the charges to the accused. The accused may be represented by any other member of the society but not by a non-member. He shall be allowed to introduce witnesses and documentary evidence and to cross-examine the witnesses of his accuser. The accused shall also be allowed to testify in his own behalf if he so desires. The Board of Censors shall have the right to examine the witnesses presented by either side but shall not have the right to summon witnesses.

The attendance at the hearing of the case shall be limited to the Boards of Censors, the two principals, and their representatives and witnesses. If the accused so desires, however, the hearing shall be public.

The Board of Censors within five days after the termination of the hearing shall prepare a report stating (1) that the charges are not sustained, or (2) that the charges are sustained and that the accused be (a) censured, (b) suspended for a definite period, or (c) expelled. Censure or suspension shall require a two-thirds vote of the members present and voting. Expulsion shall require a three-fourths vote of those present and voting. The report of the Board of Censors shall not be considered except at a regular meeting or at a special meeting called for this purpose and in either case, due notice that the report will be presented and voted on at the meeting shall be sent by the secretary to each member of the society. No action shall be taken by the society in any case until at least six weeks have elapsed since the filing of the charges.

A member found guilty of charges preferred against him may appeal to the Council of the state society provided his appeal is filed with the secretary of the Council within three months after the meeting of the county society at which his case was decided. Such an appeal shall only be made on the grounds of the method of procedure of the Board of Censors of the county society in deciding the case and shall not involve the hearing of the original case. In appealing to the Council of the state society, the member making the appeal shall specify exactly what are his grounds of complaint and shall present extracts from the proceedings of the Board of Censors of the county society as a part of his appeal.

STATE ASSOCIATIONS

Amendment to the model constitution and by-laws of state associations to take the place of Section 3, Chapter VII, page 18.

Sec. 3.—The Council shall be the Board of Censors of the state association. It shall hear and decide all questions involving the right and standing of members and all questions of an ethical nature on which an appeal is taken from the decision of the component county society. Appeals must be filed in writing with the secretary of the Council within three months after the meeting of the county society at which the case was decided. Appeals shall be limited to questions involving the manner in which the trial was conducted by the Board of Censors of the county society or by the county society itself. The appeal shall state specifically the grounds on which the appeal is taken and shall be accompanied by properly certified extracts from the proceedings of the Board of Censors or of the county society. The Council of the state association shall consider the appeal at the first regular meeting held after the appeal is filed. A member appealing from the decision of his county society may present his case in person or may be represented by any other member of the state association. The Council shall have the authority to call for the original records of the case and after proper hearing may (1) affirm the finding of the county society; (2) return the case to the county society for a rehearing; (3) reverse the decision of the county society. The decision of the Judicial Council of the state association shall be final on all questions relating to individual conduct or the rights of individual members.

In cases involving the constitution of the American Medical Association, the member concerned may appeal from the decision of the Judicial Council of the state association to the House of Delegates of the American Medical Association.

AMERICAN MEDICAL ASSOCIATION

(See recommendations for changes in the constitution and by-laws of the American Medical Association, Part 1 of this report, Chapter X, Section 10.)

III

RECOMMENDATIONS REGARDING THE UNIFORM REGULATION OF MEMBERSHIP

1. In its report for 1909, the Committee recommended that all state associations be requested to make their fiscal year conform to the calendar year and that component county societies be requested to adopt the same rule. The adoption of this recommendation by all component county and constituent state organizations will give us a uniform fiscal year coinciding with the calendar year, and running from January 1 to December 31. This recommendation is renewed and its importance urged on state associations.

2. It is further recommended that rules be adopted by all county and state organizations providing that membership shall be good only for the year for which dues are paid; that is, that the roll for each county and state association be made up each year to include as members in good standing only those who have paid their dues on or before a certain date. This is necessary in order to prevent the confusion caused by the rules existing in many societies, whereby a physician once a member is regarded as a member until he is formally dropped. In some states, a member cannot be dropped until he is at least three years in arrears. This causes much confusion as a member who has not paid his dues for the current year is not in good standing and yet is still a member. Under such conditions, we ave three classes: 1. Members in good standing. 2. Members not in good standing, but under suspension. 3. Non-membe It is the second class which causes the trouble, as they have ot the rights of members, yet are still members. As the rules garding suspension and the length of the period of suspension ffer in the various state associations, it is necessary in order pass on such cases, to keep the local variations constantly in m l in order to be able to know the exact standing of each mem r. If the entire system of suspension were abolished, we wou then have only two classes: Members and non-members, and physician would only be a member of his society in case he paid his dues before a certain date. As soon as members b me accustomed to this plan, it will be found that the collec of dues and the sending in of reports from county societies l be greatly simplified and facilitated.

As far as the exact period is concerned, various dates have been suggested. For county societies, it has been suggested that reports be made on February 1, March 1, or April 1, allowing the county secretary one, two, or three months in which to collect the dues from the members. Probably, in the beginning, it would be advisable to be as liberal as possible and to allow county secretaries three months in which to collect dues from members, calling for reports from each county society for the year on March 1. The state secretary could then make up the roll of the state society for the current year by combining the reports received from all the county societies. In this way, the state secretary's roll would be made up anew each year, the old one being entirely discarded. A complete roster could then be prepared and a copy sent to the General Secretary on April 1, thus permitting the entire membership records of the Association to be revised by May 1 so that the exact status of each member would be known before the annual meeting of the Association.

3. Members Joining During the Year.—Any one becoming a member of a county society during the year could be reported to the state secretary on a uniform report blank and the amount of his per capita assessment forwarded with the stub receipt. His name could then be included in the next monthly report from the state secretary to the General Secretary.

4. A most important practical point is that of pro-rating the dues of members joining during the year. If the state per capita assessment is $2.00 and a new member is admitted to the county society in June or July, should he be required to pay the entire amount of the state assessment? Or, should the state assessment be pro-rated for the unexpired portion of the year? While at first thought, it may seem unjust to ask a member to pay the year's assessment for half a year's membership, it seems best, for practical considerations, not to prorate the dues. The state per capita assessment is levied on each member for the expenses of the state society during the year and each member should pay his share, regardless of when he becomes a member. The plan of pro-rating involves a number of difficulties in bookkeeping and constant calculating as to the exact amount due from each society, as well as from each member.

5. Methods of Registration and Reporting.—During the past winter, letters were sent to many fraternal, benevolent, and labor organizations, asking for copies of all blanks, reports, etc., used by the secretary of the national body in his dealings with state and local organizations.

The secretaries of these bodies responded most cordially to the request for information and sent in a large amount of material, which has been gone over carefully with a view to securing suggestions from other organizations that would be of value to us. From all of the available material, the following plan is submitted for criticism:

COUNTY SOCIETY RECORDS

The American Medical Association can prepare books of blanks. [*This sample form is omitted from* THE JOURNAL. *In the Handbook for the House of Delegates it showed the two sides of the blank, the private postal card being the back of the individual member's pocket card, and the small blank headed "This side for state secretary's use" being the back of the middle stub headed "State Secretary."*] These blanks are planned to print on standard size cardboard stock, so as to trim without loss and would be of the size and shape shown on the proof. They comprise: 1. Combination individual pocket card and receipt for each member, filled out and signed by the county secretary as the member pays his dues. This blank is both a receipt and a membership card and has on the back a private mailing card blank so that the secretary can detach it, address it to the member, place a one-cent stamp thereon and mail it without having to write a letter. The card is of convenient size to go in a pocketbook and can be retained by the member during the year as evidence of membership. The pocket card plan is used not only by the American Medical Association but also by the Chicago Medical Society, St. Louis Medical Society, Indiana State Medical Association, and a number of others. It has the advantage of giving the member tangible evidence of membership and of the fact that he has paid his dues. The amount of the state per capita assessment is printed in so that it will be the same in all counties in the same state and is added to the amount of the local society dues which vary in different counties. These blanks can be put up in books of 25, 50, 75 and 100 for use in county societies of various sizes and will constitute practically all the books which the county secretary will need to keep. When a member pays his dues, this card will be filled out and given to him. At the same time, the stub for the state secretary will be filled out and the third stub which will be bound into the book, will be retained by the county secretary. A glance at this book will consequently show in every case how many members have paid their dues for the current year and who these members are. It will also show how many assessments have been forwarded to the state secretary and how many are still to be sent him. By looking over the stubs, the secretary can tell in a few minutes just how much has been paid him for dues during the current year or the total footings can be carried forward on the back of each stub.

One of the most essential features of any plan of membership regulations is that it admit of easy and positive identification both of the individual and of the society through which he holds his membership. To accomplish these two points, the following plan is suggested:

(a) Blank receipt books for different years to bear a letter of identification which will appear on all of the blanks, as: 1911(A), 1912(B), 1913(C), etc. The single letters of the alphabet will thus provide for the next twenty-six years. At the expiration of that period, a new combination can easily be devised, as: 1938(XA), 1939(XB), 1940(XC), etc., thus enabling the blank for the current year to be identified at once.

(b) All blanks printed by the Association for county societies can be given a series of numbers corresponding approximately to the number of members in the state, a sufficient margin being left for all possible additions for the year.

By attaching a numbering device to the press on which these cards are printed, the number can be printed at the same time and can be automatically changed with each blank. In preparing these books, the secretary of the Illinois State Medical Society, for instance, would be notified that number 12,001 to 20,000 had been reserved for his state and would be asked to specify how many receipt books his county societies would need, indicating the number of books of 25, 50, 75, or 100 cards. Each member on paying his dues would receive a pocket card, which pocket card would bear the letter for the year and the serial number for his county and state. For instance, a member paying his dues in Chicago would receive pocket card (A) 13,527. The same serial number would appear on the stub sent to the state secretary and on the stub retained by the county secretary. A record would be kept in the General Secretary's office of the books sent out. If, now, the Chicago member holding the above card should go to California or Florida for his health and if any question should be raised regarding his membership, he would be called on to report the number of his pocket card. If he said he held pocket card (A) 13,527, it would indicate at once that he held his membership in Cook County and in Illinois and had paid his dues for the current year and was consequently a member in good standing. It would furthermore serve as a positive means of identifying the individual in California or Florida with the individual who had formerly been in Chicago. It would also afford a constant check both for the state secretary and the General Secretary on the county society membership.

At the end of the year, each county secretary would return his receipt book to the state secretary. The number of pocket cards remaining intact and the number of stubs would show at once whether the reports of the county secretary were correct or not and would also afford the state secretary a further check on the county secretary's report. After checking up these stubs, the book could, if necessary, be forwarded to the General Secretary's office and would serve as a further check on the General Secretary's records.

6. Compensation for County Secretaries.

Probably the weakest point in our organization to-day is that the county secretary, the executive officer of the organization which is the foundation of the entire body, is in most of cases, not compensated, and is consequently asked to do work at a considerable sacrifice. Practically all successful fraternal, benevolent, and labor organizations have an arrangement by which local secretaries are paid, either by the local organization or by the general society. Most of the county societies at present only collect a sufficient amount of dues from members to pay the annual running expenses of the society, and as much of the clerical work demanded of the secretary is for the benefit of the state and national organizations, it would probably be difficult to secure the adoption of any uniform law for the compensation of county secretaries by the county society. The following suggestion is therefore submitted for the consideration of the House of Delegates: Each county secretary at the end of the year to return the book of stubs and unused receipts to the state secretary as suggested above, the state secretary to check them up and forward them to the general Secretary of the American Medical Association. Each secretary who returns his check book to receive as compensation from the American Medical Association, 25 cents per member, to be remitted as soon as the stub book is received and verified.

Adoption of the plan outlined above would be entirely voluntary with each state society. If it wished to adopt such a plan, it could do so; if it preferred to retain its own plan, it could do so, but the general conduct of the organization would be along the lines outlined above and the majority of state associations would probably soon find that it was more convenient to conform to the uniform plan than to retain individual variations thereof. County secretaries would only be compensated in case the state society adopted the proposed plan and in case they sent in their reports at the end of the year. Probably for several years, only a part of the state associations would adopt it. Even if eventually all the state associations with an aggregate membership of 70,000 were to adopt such a plan, the total expense involved would amount to only about $17,500, while the resulting gain in business methods, postage, stenographer and clerk hire, loss through unpaid dues, disaffected members, etc., would far more than make up this amount as far as the entire organization is concerned.

STATE ASSOCIATIONS

The secretary of the state association would receive on the first of April (?) a report from each county secretary enclosing the stub for each member who had paid his dues up to date. These stubs could either be arranged as an index or the names could be transferred to a separate card index, as the state secretary saw fit. From all the county society reports, a complete roster of members for the year could then be made up, a copy of which could then be forwarded to the General Secretary when completed. Additional members joining from time to time, could be reported by the stubs, accompanied in each case by the per capita assessment.

OFFICES OF SECRETARY AND TREASURER TO BE UNITED

It has been suggested by a number of members of the Committee that an essential and important reform should be inaugurated as far as county society officers are concerned, in combining the offices of secretary and treasurer. Uniting these two positions will obviate the necessity of keeping two sets of records, as well as the possibility of errors through transmitting names from one official to another. The average county society has a membership of 34. To handle the business affairs of a body of this size certainly does not require two officers and there is no reason why the time of two men should be employed when on man can look after the business affairs of the society more effectively. Exception to this might be made in some of the large city societies where the work is heavier but in probably 95 per cent. of county societies a single officer is sufficient for these two positions.

The question of recommending the union of secretary and treasurer for state associations has also been raised and is submitted for consideration. Is there any practical necessity of having two officers, generally located in different towns with two sets of records? Could not the business affairs of the state association be better transacted by one man, with a saving of expense and labor?

RECOMMENDATIONS

Your committee realizes the importance of the work assigned to it and the impossibility at this time of presenting a final report on the many and complex matters before it for consideration. Constructive work in any organization is necessarily and advisedly slow. This is especially the case when distance and other duties make it practically impossible for the committee to meet and when all the work must be done by correspondence. Your committee makes the following recommendations:

(1) That the committee be continued and that the president be authorized to appoint active secretaries in place of those who have retired, if he deems this advisable.

(2) That the recommendations regarding disciplining of members if approved by the House of Delegates, be transmitted to the secretaries of the various state associations and that they be also printed in the *American Medical Association Bulletin* and the attention of county societies be called to them.

(3) That the committee be instructed to submit its recommendations regarding the uniform regulation of membership to the secretary of each constituent state association for criticisms and further suggestions, and that the committee be further instructed to submit to the House of Delegates at the 1911 session a complete system for the use of county and state societies and the American Medical Association for the regulation of membership, including all blanks, forms, files and regulations needed to put the proposed plan in operation, for the further consideration of the House of Delegates.

(4.) That the committee be instructed to revise the standard constitutions for county and state societies in accordance with the constitution and by-laws of the American Medical Association as adopted at this session. Respectfully submitted,

Thomas McDavitt, Chairman,
Walter R. Steiner,
J. H. J. Upham,
B. R. Schenck,
A. W. McAlester, Jr.,
I. C. Chase,
Frederick R. Green, Secretary.

Report of Committee on United States Pharmacopeia

To the Board of Trustees of the American Medical Association:

Your committee on the Pharmacopeia reports as follows:

The U. S. Pharmacopeia is at present the exclusive property of the United States Pharmacopeial Convention; it is the privilege of this convention and of this alone to determine what the Pharmacopeia shall be. The convention is composed of representatives from the medical and pharmaceutical professions; about two-thirds of those eligible under the present constitution belong to the former and one-third to the latter. It seemed to your committee that the most useful work the committee could do would be to collect information which would be of assistance to the medical delegates to the convention. The phase of the Pharmacopeial Revision in which the medical profession is chiefly interested is the scope of the book, and there has been an almost unanimous expression of opinion to the effect that the medical delegates should, to a large extent, determine this, and the Chairman of the Committee on Revision for 1900-1910 has formally requested the American Medical Association to prepare lists of drugs for admission to or deletion from the U. S. P.

In view of the many drugs of interest chiefly to practitioners in certain fields it was believed that the most valuable information as to admissions would be obtained from members of the various sections of the American Medical Association. Accordingly each Section of the Association was requested to appoint a committee on the Pharmacopeia. Five of the committees, those of the Sections on Practice of Medicine, on Ophthalmology, on Stomatology, on Pathology and Physiology and on Obstetrics and Diseases of Women have reported; the reports have been published and commented on in The Journal of the American Medical Association (Sept. 4, 1909, pp. 791, 793, 796; Oct. 30, 1909, pp. 1491, 1500; April 23, 1910, p. 1389 and April 30, 1910, p. 1457). Similar reports by the Sections on Dermatology, Laryngology and Otology, and Nervous and Mental Diseases, and probably from other Sections also, will be presented at the St. Louis session and will then be available for the Committee on Revision.

It was believed that much valuable information could also be obtained from the professors of materia medica and therapeutics and pharmacology in the medical schools entitled to representation in the convention. About 50 per cent. of all the delegates to the convention and about 75 per cent. of the medical delegates are appointed by the medical schools and no one connected with these is in such a favorable position to speak as to the wishes of the schools as are these professors. A letter was therefore addressed to them with the request that they express an opinion not only on the general principles to be followed in revising the Pharmacopeia but also on the desirability of retaining each of the 957 titles in the present Pharmacopeia.

Replies were received from all parts of the United States. Many of those replying stated that they had prepared their replies only after extensive consultation with their colleagues and alumni, careful examination of hospital records, etc. It is believed that these replies represent accurately the present attitude of medical schools toward the Pharmacopeia, and as the medical schools have, according to the present constitution of the Pharmacopeial Convention, a larger ownership in the Pharmacopeia than any other group of members, it is believed that these replies merit very careful consideration on the part of the convention. From 131 replies received the following figures were obtained:

S TO FUNCTION

Should the Pharmacopeia of the United States be a book of minimum standards designed *mainly* for the regulation of commerce in drugs and chemicals and the restriction of adulteration and fraud?

Yes—17. *No—54.* *Uncertain—4.*

Or should the Pharmacopeia be a compilation of acceptable standards for desirable medicaments and designed, primarily, for the protection of the public health?

Yes—98. *No—5.* *Uncertain—4.*

SCOPE

Should the Pharmacopeia embody standards for all of the 50,000 or more drugs and preparations that have been or are used as medicine for man or other animals?

Yes—2. *No—84.* *Uncertain—3.*

Or should the Pharmacopeia include all of the widely used drugs and preparations, irrespective of their medicinal value, and thus practically all of the titles now found in the U. S. P., the N. F., and the present edition of N. N. R.?

Yes—1. *No—83.* *Uncertain—3.*

Or should the Pharmacopeia continue to be, as is at present attempted, the standard for medicaments of recognized value and established use and, therefore, be restricted rather than extended in number of titles?

Yes—102. *No—2.* *Uncertain—4.*

GENERAL PRINCIPLES TO GOVERN ADMISSIONS AND DELETIONS

Should drugs that possess no well-recognized medicinal value be included in the Pharmacopeia?

Yes—5. *No—106.* *Uncertain—9.*

Should the duplication of drugs having essentially the same medicinal action be encouraged?

Yes—21. *No—93.* *Uncertain—15.*

When the medicinal properties of a drug are fully represented by an active principle, should both the drug and the active principle be retained?

Yes—35. *No—48.* *Uncertain—26.*

Should substances that are largely affected by commercial conditions, such as foods (figs and prunes, for example) and beverages (brandy and whisky, for example), be retained in the list of pharmaceutical articles?

Yes—8. *No—83.* *Uncertain—20.*

Should substances that have no direct therapeutic value and are primarily used as solvents or reagents be relegated to the Appendix?

Yes—113. *No—7.* *Uncertain—9.*

Should the now frequent duplication of pharmaceutical preparations, such as wines, vinegars, syrups, tinctures, and fluidextracts of the same drug, be discouraged?

Yes—104. *No—12.* *Uncertain—13.*

Should fixed formulas for mixtures be discouraged?

Yes—85. *No—30.* *Uncertain—13.*

Should all formulas for preparations that can be made extemporaneously be deleted from the Pharmacopeia?

Yes—75. *No—38.* *Uncertain—15.*

Should all complex preparations be relegated to the National Formulary, and the Pharmacopeia itself retained as a standard for simples and simple preparations?

Yes—92. *No—23.* *Uncertain—12.*

Should the Pharmacopeia endeavor to comply with well-established international nomenclature and standards for drugs and preparations?

Yes—125. *No—0.* *Uncertain—2.*

Should compounds or mixtures that are permanently controlled, either by secrecy or proprietary rights, be admitted to the Pharmacopeia?

Yes—7. *No—104.* *Uncertain—5.*

Should the Pharmacopeia be the accepted standard for medicinal prescribing?

Yes—120. *No—1.* *Uncertain—5.*

Has it been your experience that, in the eyes of medical students and practitioners, Pharmacopeial recognition of a drug implies, in a general way, an endorsement of its usefulness in therapeutics?

Yes—87. *No—29.* *Uncertain—8.*

Of the articles now contained in the Pharmacopeia practically no objections were made to the following:

Acacia
Acetanilidum
Acetphenetidinum
Acidum Benzoicum
Acidum Citricum
Acidum Boricum
Acidum Hydrochloricum Dilutum
Acidum Salicylicum
Acidum Tannicum
Aconitum
Tinctura Aconiti
Adeps Benzoinatus
Adeps Lanæ Hydrosus
Æther
Alcohol
Aloinum
Alumen
Ammonii Carbonas
Ammonii Chloridum
Amylis Nitris
Antimonii et Potassi Tartras
Antipyrina
Apomorphinæ Hydrochloridum
Aqua Destillate
Aqua Ammoniæ
Aqua Aurantii Florum
Aqua Camphoræ
Aqua Cinnamomi
Aqua Hydrogenii Dioxidi
Aqua Menthæ Piperitæ
Aqua Rosæ
Argenti Nitras
Argenti Nitras Fusus
Arseni Trioxidum
Liquor Potassii Arsenitis
Asafœtida
Oleoresina Aspidii
Atropina
Atropinæ Sulphas
Balsamum Peruvianum
Balsamum Tolutanum
Syrupus Tolutanus
Tinctura Belladonnæ Foliorum
Extractum Belladonnæ Foliorum
Tinctura Bezoini
Betanaphthol
Bismuthi Subcarbonas
Bismuthi Subnitras
Caffeina
Caffeina Citrata
Calcii Carbonas Præcipitatus
Calcii Chloridum
Calx Chlorinata
Camphora
Aqua Camphoræ
Spiritus Camphoræ
Tinctura Opii Camphorata
Linimentum Saponis
Cantharis
Tinctura Cantharidis
Ceratum Cantharidis
Capsicum
Tinctura Capsici
Chloralum Hydratum
Chloroformum
Spiritus Chloroformi
Linimentum Chloroformi
Chrysarobinum
Cinchona
Tinctura Cinchonæ
Cocainæ Hydrochloridum
Codeina
Codeina Sulphas
Colchicina
Collodium
Collodium Flexile
Copaiba
Creosotum
Cresol
Creta Præparata
Cubeba
Oleoresina Cubebæ
Cupri Sulphas
Digitalis
Infusum Digitalis
Tinctura Digitalis
Elaterinum
Elixir Aromaticum
Ergota
Fluidextractum Ergotæ
Extractum Ergotæ
Eucalyptol
Fel Bovis Purificatum
Massa Ferri Carbonatis
Pilulæ Ferri Carbonatis
Tinctura Ferri Chloridi
Ferri Sulphas
Ferrum Reductum
Gentiana
Tinctura Gentianæ Composita
Glandulæ Suprarenales Siccæ
Glandulæ Thyroideæ Siccæ
Glycerinum
Suppositoria Glycerini
Glycyrrhiza
Guaiacol
Guaiacolis Carbonas
Hexamethylenamina
Homatropinæ Hydrobromidum
Hydrargyrum cum Creta
Massa Hydrargyri
Unguentum Hydrargyri
Hydrargyri Chloridum Corrosivum
Hydrargyri Chloridum Mite
Hydrargyri Iodidum Flavum
Hydrargyri Iodidum Rubrum
Hydrargyri Oxidum Flavum
Hydrargyrum Ammoniatum
Hyoscinæ Hydrobromidum
Hyoscyamus
Iodoformum
Iodum
Tinctura Iodi
Ipecacuanha
Fluidextractum Ipecacuanhæ
Syrupus Ipecacuanhæ
Pulvis Ipecacuanhæ et Opii
Jalapa
Resina Jalapæ
Liquor Ammonii Acetatis
Liquor Calcis
Liquor Magnesii Citratis
Liquor Plumbi Subacetatis
Liquor Potassii Arsenitis
Magnesii Carbonas
Magnesii Oxidum
Magnesii Sulphas
Massa Ferri Carbonatas
Massa Hydrargyri
Menthol
Methyl Salicylas
Morphina
Morphinæ Hydrochloridum
Morphinæ Sulphas
Nux Vomica
Extractum Nucis Vomicæ
Tinctura Nucis Vomicæ.
Oleum Amygdalæ Expressum
Oleum Lini
Oleum Morrhuæ
Oleum Olivæ
Oleum Ricini
Oleum Theobromatis
Oleum Tiglii
Oleum Caryophylli
Oleum Cubebæ
Oleum Eucalypti
Oleum Gaultheriæ
Oleum Limonis
Oleum Menthæ Piperitæ
Oleum Picis Liquidæ
Oleum Rosæ
Oleum Santali
Oleum Terebrinthinæ Rectificatum
Opii *Pulvis*
Tinctura Opii
Tinctura Opii Deodorata
Tinctura Opii Camphorata
Extractum Opii
Pulvis Ipecacuanhæ et Opii
Opium
Pancreatinum
Pepsinum
Petrolatum
Petrolatum Album
Petrolatum Liquidum
Phenol
Phenylis Salicylas
Physostigminæ Salicylas
Pilocarpinæ Hydrochloridum
Pix Liquida
Plumbi Acetas
Liquor Plumbi Subacetatis
Podophyllum
Resina Podophylli
Potassii Acetas
Potassii Bicarbonas
Potassii Bitartras
Potassii Bromidum
Potassii Chloras
Potassii Citras
Potassii Iodidum
Potassii Nitras
Potassii Permanganas
Potassii et Sodii Tartras
Syrupus Pruni Virginianæ
Pulvis Ipecacuanhæ et Opii
Quinina
Quininæ Bisulphas
Quininæ Hydrochloridum
Quininæ Sulphas
Ceratum Cantharidis
Resina Jalapæ
Resina Podophylli
Resorcinol
Rhamnus Purshiana
Fluidextractum Rhamni Purshianæ
Extractum Rhamni Purshianæ
Rheum
Saccharum Lactis
Salicinum
Santoninum
Scilla
Scopolaminæ Hydrobromidum
Senna
Fluidextractum Sennæ
Serum Antidiphthericum
Sodii Benzoas
Sodii Bicarbonas
Sodii Boras
Sodii Bromidum
Sodii Chloridum
Sodii Citras
Sodii Iodidum
Sodii Nitris
Sodii Phosphas
Sodii Salicylas
Sodii Sulphas
Sparteinæ Sulphas
Spiritus Ætheris Nitrosi
Spiritus Ammoniæ Aromaticus
Spiritus Camphoræ
Spiritus Chloroformi
Spiritus Glycerylis Nitratis
Strophanthinum
Strophanthus
Tinctura Strophanthi
Strychinina
Strychninæ Sulphas
Sulphonethylmethanum
Sulphur Lotum
Unguentum Sulphuris
Suppositoria Glycerini
Syrupus Aurantii
Syrupus Ferri Iodidi
Syrupus Ipecacuanhæ
Syrupus Pruni Virginianæ
Syrupus Tolutanus
Terebenum
Terpini Hydras
Thymol
Thymolis Iodidum
Unguentum
Fluidextractum Uvæ Ursi
Fluidextractum Viburni Prunifolii
Zinci Chloridum
Zinci Oxidum
Unguentum Zinci Oxidi
Zinci Stearas
Zinci Sulphas
Zingiber
Tinctura Zingiberis
Syrupus Zingiberis

A majority of those voting expressed themselves in favor of deleting from the list of medicaments in the Pharmacopeia the following:

Syrupus Acaciæ
Pulvis Acetanilid Compositus
Acetonum
Acidum Camphoricum[1]
Acidum Hypophosphorosum
Acidum Stearicum
Acidum Sulphurosum
Acidum Tartaricum
Fluidextractum Aconiti
Æther Aceticus
Æthylis Carbamas
Tinctura Aloes et Myrrhæ
Pilulæ Aloes et Ferri
Pilulæ Aloes et Mastiches
Pilulæ Aloes et Myrrhæ
Extractum Colocynthidis Compositum
Pilulæ Rhei Compositæ
Althæa[1]
Alumini Hydroxidum
Alumni Sulphas
Amygdala Amara
Emulsum Amygdalæ
Anthemis[1]
Apocynum
Fluidextractum Apocyni
Aqua Fœniculi
Argenti Cyanidum
Argenti Oxidum
Arnica
Liquor Sodii Arsenatis
Emulsum Asafœtidæ
Auri et Sodii Chloridum
Benzaldehydum
Benzinum
Benzinum Purificatum
Beriberis[1]
Bismuthi Citras
Bismuthi et Ammonii Citras
Bromum
Calamus[1]
Fluidextractum Calami
Calcii Bromidum
Emulsum Olei Morrhuæ cum Hypophosphitibus
Calcii Sulphas Exsicattus
Calendula[1]
Tinctura Calendulæ
Fluidextractum Calumbæ
[illegible]
[illegible] ci
[illegible]
Carum
Cassia Fistula[1]
Cataplasma Kaolini
Ceratum Resinæ Compositum
Chimaphila[1]
Fluidextractum Chimaphilæ[1]
Chirata[1]
Chondrus
Chromii Trioxidum
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
Cinnaldehydum
Tinctura Gambir Composita
Vinum Opii
Vinum Cocæ
Oleatum Cocainæ[1]
Coccus
Conium
Fluidextractum Conii
Convallaria
Coriandrum
Trochisci Cubebæ
Cusso
Cypripedium[1]
Fluidextractum Cypripedii[1]
Elastica
Trituratio Elaterini
Eriodictyon
Fluidextractum Eriodictyi
Fluidextractum Eucalypti
Eugenol
Euonymus[1]
Fluidextractum Euonymi[1]
Extractum Euonymi[1]
Eupatorium[1]
Fluidextractum Eupatorii[1]
Fel Bovis
Mistura Ferra Composita
Pilulæ Aloes et Ferri
Ferri Sulphas Granulatus
Vinum Ferri
Ferri et Ammonii Sulphas
Ferri et Ammonii Tartras
Ferri et Potassii Tartras
Ferri et Quininæ Citras
Vinum Ferri Amarum
Ferri et Strychninæ Citras
Ficus
Tinctura Gallæ
Tinctura Gambir Composita[1]
Trochisci Gambir[1]
Geranium[1]
Fluidextractum Geranii[1]
Trochisci Glycyrrhizæ et Opii
Glycyrrhizinum Ammoniatum
Gossypii Cortex
Guarana
Fluidextractum Guaranæ
Hæmatoxylon
Extractum Hæmatoxyli
Hamamelidis Folia
Fluidextractum Hamamelidis Foliorum
Hedeoma[1]
Humulus
Emplastrum Hydrargyri
Vinum Ipecacuanhæ
Cataplasma Kaolini
Krameria[1]
Tinctura Krameriæ[1]
Fluidextractum Krameriæ[1]
Extractum Krameriæ[1]
Syrupus Krameriæ[1]
Trochisci Krameriæ[1]
Lactucarium
Tinctura Lactucarii
Syrupus Lactucarii
Lappa[1]
Fluidextractum Lappæ[1]
Leptandra
Fluidextractum Leptandræ
Extractum Leptandræ
Limonis Succus
Liquor Ferri Tersulphatis
Liquor Hydrargyri Nitratis
Liquor Sodii Arsenatis
Liquor Zinci Chloridi
Lupulinum
Mangani Sulphas
Manna
Infusum Sennæ Compositum
Marrubium[1]
Mastiche
Pilulæ Aloes et Mastiches
Matico[1]
Fluidextractum Matico[1]
Matricaria[1]
Mel
Mel Depuratum
Mel Rosæ
Mezereum[1]
Fluidextractum Mexerei
Fluidextractum Sarsaparillæ Comp.
Mistura Ferri Composita

Mistura Rhei et Sodæ
Moschus
Tinctura Moschi
Myristica
Mistura Ferri Composita
Pilulæ Aloes et Myrrhæ
Pilulæ Rhei Compositæ
Tinctura Aloes et Myrrhæ
Oleatum Atropinæ[1]
Oleatum Cocainæ[1]
Oleatum Quininæ
Oleatum Veratrinæ
Oleum Erigerontis[1]
Oleum Hedeomæ[1]
Oleum Sabinæ[1]
Acetum Opii[1]
Vinum Opii
Emplastrum Opii
Pilulæ Opii
Trochischi Glycyrrhizæ et Opii
Pareira[1]
Fluidextractum Pareiræ[1]
Phytolacca[1]
Fluidextractum Phytolaccæ[1]
Pimenta[1]
Piper
Piperina[1]
Plumbi Iodidum
Plumbi Nitras
Pilula Podophylli, Belladonnæ et Capsici
Potassii Cyanidum
Potassii Dichromas
Potassii Ferrocyanidum
Unguentum Potassii Iodidi
Prunum
Fluidextractum Pruni Virginianæ
Pulvis Acetanilidi Compositus[1]
Pulvis Morphinæ Compositus
Pulvis Rhei Compositus
Pyrethrum
Pyroxylinum
Fluidextractum Quassiæ
Extractum Quassiæ
Quercus
Fluidextractum Quercus
Oleatum Quininæ
Glyceritum Ferri Quininæ et Strychninæ Phosphatum
Ceratum Resinæ Compositum
Pilulæ Podophylli, Belladonnæ et Capsici
Mistura Rhei et Sodæ
Pulvis Rhei Compositus
Pilulæ Rhei Compositæ
Rosa Gallica
Confectio Rosæ
Fluidextractum Rosæ
Mel Rosæ
Rubus[1]
Fluidextractum Rubi[1]
Rhus Glabra[1]
Fluidextractum Rhois Glabræ[1]
Syrupus Rubi[1]
Sabal[1]
Fluidextractum Sabal[1]
Sabina
Fluidextractum Sabinæ
Salvia[1]
Fluidextractum Sanguinariæ
Tinctura Sanguinariæ
Fluidextractum Sarsaparillæ
Fluidextractum Sarsaparillæ Compositum
Sassafras
Sassafras Medulla
Mucilago Sassafras Medullæ
Acetum Scillæ
Scopola
Fluidextractum Scopolæ
Extractum Scopolæ[1]
Scutellaria[1]
Fluidextractum Scutellariæ[1]
Infusum Sennæ Compositum
Confectio Sennæ
Serpentaria
Sodii Arsenas Exsiccatus
Liquor Sodii Arsenatis
Trochisci Sodii Bicarbonatis
Sodii Pyrophosphas
Spiritus Frumenti
Spiritus Juniperi
Spiritus Juniperi Compositus
Spiritus Menthæ Viridis
Spiritus Vini Gallici
Staphisagra[1]
Fluidextractum Staphisagra[1]
Stillingia[1]
Fluidextractum Stillingiæ[1]
Styrax
Sulphur Præcipitatum
Sulphur Sublimatum
Sulphuris Iodidum
Sumbul
Fluidextractum Sumbul
Extractum Sumbul
Syrupus Ferri, Quininæ et Strychininæ Phosphatum
Syrupus Krameriæ
Syrupus Lactucariæ
Syrupus Rosæ
Syrupus Rubi
Tamarindus
Taraxacum
Triticum
Fluidextractum Tritici
Mucilage Ulmi
Vanillinum
Oleatum Veratrinæ
Unguentum Veratrinæ
Vinum Rubrum
Xanthoxylum[1]
Fluidextractum Xanthoxyli[1]
Zea
Zinci Iodidum
Oleoresina Zingiberis
Pulvis Rhei Compositus
Fluidextractum Aromaticum

There were a number of preparations, including several recently introduced into the Pharmacopeia, on which many did not express a direct opinion.

The committee did not deem it wise to make specific recommendations as to the revision of the Pharmacopeia except to express the opinion that if the recommendation of the Board of Trustees of the Pharmacopeial Convention that an advisory Committee on Revision of fifty be selected is approved, the latter should be composed equally of delegates from medical and pharmaceutical organizations and that the nominating committee should be instructed to submit the names of 25 medical and of 25 pharmaceutical delegates; such a request seems reasonable in view of the fact that about two-thirds of the organizations entitled to representation in the convention are medical organizations.

Respectfully submitted.

George Dock.
Robert A. Hatcher.
Reid Hunt.
Edward E. Hyde.
W. S. Thayer.

Exceptions:—Dr. S. Solis Cohen takes "exception to the form of the questions on the scope of the Pharmacopeia, especially the last question, because the 'therefore' which is included in that question does not follow" and also because "the question of basic drugs is one thing and the question of preparations included in the N. F., etc., quite another." He also thinks "a large proportion of the uncertain answers received on this [there were 3 uncertain and 84 positive answers.—Chairman] and other questions is due to the bad form of the questions." He also takes exception to the form of the question relating to the admission of "compounds or mixtures that are permanently controlled either by secrecy or proprietary rights" considering it to be "doubly misleading in that it confounds compounds and mixtures (concerning one of which the answer might be 'yes' and the other 'no'); and again confusing secrecy and proprietorship (concerning one of which the answer could only be 'no,' while concerning the other there is considerable room for debate, and an honest 'yes' would doubtless be given by many who have answered 'no' to the full question, were this particular issue separated). The question if separated would in part read: 'Should drugs having a definite and known chemical composition, but monopolized by virtue of patent rights, be excluded from the Pharmacopeia?' This question has not been put distinctly from other issues, and therefore has not been answered." [The question related only to *permanently* controlled articles; the question of articles controlled by "patent rights" in which the proprietorship is limited, was not raised.—Chairman.]

Officers of Sections

The newly elected officers of sections are given in this issu in the General News Department.

Society Proceedings

AMERICAN GYNECOLOGICAL ASSOCIATION

Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Concluded from page 1995)

Fibroid Tumor Complicating Pregnancy and Rendering Natural Labor Impossible

Dr. B. F. Baer, Philadelphia: Early in my medical career I saw two cases of pregnancy complicated with fibroid tumor, in one of which rupture of the uterus occurred during labor, followed by death of both the mother and child. In the other case, death resulted from septic peritonitis in consequence of injury of the soft parts following instrumentation for dystocia caused by complicating fibroid. The child perished during the labor. The first patient was attended by a midwife. In the other case I was an assistant. This experience impressed on me the fact that pregnancy complicated with fibroid tumor was a most serious condition. I will report briefly six cases. The first was one of multiple fibroid tumor of the uterus complicating pregnancy, with hemorrhage and miscarriage; myomectomy and oöphorectomy; recovery. In the second, I resorted to supravaginal hysterectomy for fibroid tumor complicating pregnancy and rendering labor impossible; recovery. The third case was one of fibroid tumor complicating pregnancy, hemorrhage and miscarriage, in which supravaginal hysterectomy was done; recovery. In the fourth, a fibroid tumor in the posterior wall of the uterus complicated pregnancy. Pelvic incarceration rendered the continuance of pregnancy dangerous and labor impossible, and supravaginal hysterectomy was done at the fifth month, followed by recovery. In the fifth, pregnancy was complicated with fibroid and ovarian tumor; supravaginal hysterectomy was done, followed by recovery. In the sixth case, pregnancy was complicated with fibroid tumor in the lower zone and broad ligament, blocking the pelvis and rendering natural labor impossible. Abdominal hysterectomy was done at the seventh month; recovery. These cases show the importance of operating on tumors interfering with the natural delivery of the child.

DISCUSSION

Dr. I. S. Stone, Washington, D. C.: A distinction ought to be made between the disappearance and reduction in size of fibroids. I do not believe in the disappearance of fibroids unless degeneration sets in, or unless necrosis takes place and a submucous abscess forms and discharges. A fibroid may disappear in that way or by twisting of the pedicle, getting separated from the uterus and disappearing. But I take no stock in the idea that fibroids will disappear after pregnancy.

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[1] Also recommended for deletion by Section Committees of the American Medical Association.

Dr. Charles M. Green, Boston: In one case I found the pelvis of a woman filled with a fibroid tumor, so that nothing else could be felt. During transmission to the hospital the fibroid pulled out of the pelvis, and when I saw the woman I could reach the os and found a breech presentation. I gave her further time, the fibroid ascended out of the way, the woman was delivered of a living child, and made a normal convalescence. When she became pregnant again I watched her through pregnancy, and nothing occurred in the size of the fibroid. She went through that pregnancy, delivered herself and there was no perceptible increase in the fibroid.

Dr. Edward Reynolds, Boston: Two or three years ago I saw a young pregnant woman with a fibroid in the uterus. She miscarried. I determined the position of the fibroid with fingers inside the uterus and hand outside. I operated on her for other causes about a year ago, and found at the site of the fibroid no tumor whatsoever, but a white, comparatively bloodless area in the uterine wall, which evidently represented complete disappearance of the tumor. I do not believe such cases are exceptionally rare. In the general question of fibroids during pregnancy, we should discriminate carefully between fibroids of the fundus and fibroids in the lower segment of the uterus. Fibroids of the fundus, especially if pedunculated, can be removed safely during pregnancy and complicate labor comparatively little.

Dr. Willis E. Ford, Utica, N. Y.: I have one very remarkable case to report of a girl whom I saw before her marriage with an intramural fibroid which reached half way up to the umbilicus. I was called to see her after marriage when she was pregnant at the fifth month. This was 14 years ago. I got ready to do a Porro operation. Fortunately nothing happened. She was delivered in the normal way. The other day I examined her and found that this fibroid tumor has entirely disappeared, as far as I am able to judge.

Dr. Richard C. Norris, Philadelphia: I have seen tumors situated in the lower segment of the uterus retract themselves, these tumors being drawn out of the way by the action of the longitudinal fibers, and disappear when I was about ready to perform Cesarean section, and the woman be delivered spontaneously. It is my conviction that myomectomy should be more restricted during pregnancy than at other times.

Dr. George T. Harrison, New York: It is well known that in negro women myomata are much more common than in those of the white race. The exhaustive paper of Hofmeier demonstrates conclusively that the position of a myoma is not a bar to conception, and the proof is found among the negro race. A number of years ago I reported a case in which myomectomy was performed on a woman when she was several months pregnant, and she was carried to full term. A fibroid tumor had grown in the meantime in the pelvis which necessitated Cesarean section, followed by hysterectomy; unfortunately the woman had sepsis and died from it.

Dr. B. F. Baer: If a woman has a fibroid complicating pregnancy, and she has not borne any children, but desires to have one child, she should have that privilege, and pregnancy allowed to go on in the presence of the fibroid, but it is our duty to advise her as to the dangers of this fibroid.

Extrauterine Pregnancy of Eleven Months

Dr. E. C. Dudley, Chicago: I operated in this case July 20, 1909, two months after term. The mass was posterior and to the left of the uterus. The incision was made in the median line. The tumor was almost universally fixed by adhesions or by continuity of development. The adhesions were intestinal, uterine, parietal, and omental; in fact, they existed between the mass and all adjacent structures, especially to the anterior abdominal wall and the sigmoid flexure. The mass, about eleven inches in diameter, was separated from its adhesions and shelled out unruptured. The resulting raw surfaces were equal approximately to a surface not less than twelve inches square. An incision was made back of the uterus into the posterior vaginal fornix, and through this incision a continuous gauze drain was introduced from above downward into the vagina. The upper part of this drain consisted of gauze packing sufficient to fill the field of operation and to prevent oozing. This packing was then covered in by stitching together the peritoneal surfaces above it in such a way as to cut off completely the field of operation from the remaining portion of the abdominal cavity, and to cover all with normal peritoneum. This suturing across the pelvis from side to side involved extensively intestinal structures, and especially the sigmoid flexure, which was stitched to omental, parietal, bladder and other visceral peritoneum wherever possible to bring the parts together in order to quarantine the field of operation from the general peritoneum. The abdominal wound was closed without drain and healed promptly. A slight fecal fistula subsequently discharged through the vagina, but closed spontaneously in a few days. Such extensive enucleation of so large a mass due to ectopic pregnancy ordinarily would not be undertaken. The fact that success followed this operation does not necessarily influence me in recommending the procedure as a routine in similar cases. I report the method with the suggestion that it might be considered more surgical than the conventional operation of incision and drainage, but although more surgical, it perhaps may with subsequent experience prove to be more dangerous.

DISCUSSION

Dr. Edwin B. Cragin, New York: I have operated in four cases of ectopic gestation at full term. Two of the women were delivered of living children at the operation. The question of operation revolves around the point whether the sac and its contents shall be removed at the single sitting, or the sac opened and the cavity drained. In one of the four cases I was able to ligate the vessels supplying it and able to enucleate the sac, but was obliged to take the uterus with it. This gave me primary union of the abdominal wall, without drainage, and a short convalescence. It is exceptional, judging from my small experience, that one can with safety ligate the nutrient vessels and remove the sac *en masse*. In the other three patients the placenta was adherent to the structures at the floor of the pelvis, and to have attempted to ligate the vessels supplying the placental sac would have killed the woman. In these three cases a wiser procedure was to leave the sac open, to separate the placenta gradually, and then let the wound heal by granulation. This was done. All the patients recovered, but this was only one of the four cases in which I was able to follow anything like the procedure reported by Dr. Dudley of complete enucleation.

Dr. E. E. Montgomery, Philadelphia: About fifteen years ago I operated on a woman, who was 15 months pregnant. The uterus was in front of the sac. After opening the abdomen it was found that the small intestines were so intimately related to the sac that it was impossible to attempt its removal. We removed the fetus, and made a communication between the sac and the abdominal wall, and packed with iodoform gauze. While the patient had a stormy convalescence, she recovered.

Dr. Herman J. Boldt, New York: I do not believe that one can lay down a hard and fast rule as to the procedure which must be pursued in any given case. I have had four cases of ectopic gestation at or near term, and in only one instance was it possible to remove the sac without rupture. In the others I resorted to a procedure similar to that described by Dr. Cragin. I lost one case.

Dr. A. Lapthorn Smith, Montreal: I have had two cases of tubal pregnancy at term. One of the women refused operation and is alive to-day. In the other I removed the child, and when I attempted to enucleate the sac the hemorrhage was so profuse that I stopped, and closed the wound. While she had no rise of temperature, she died in eight days from exhaustion. I would favor leaving the placenta in cases in which profuse hemorrhage is likely to follow its removal. One of my colleagues attempted to remove the placenta in such a case and the woman died on the table from hemorrhage.

Dr. E. W. Cushing, Boston: I had one of these cases many years ago in which I waited until the child died. It seemed a safer thing to wait about a month, which I did, then opened the abdomen. The sac was thin, and the child was found loose in the abdominal cavity. The woman recovered without trouble.

Dr. G. B. Miller, Washington, D. C.: About five years ago I had a case of ectopic gestation in which I operated, delivering a living child at term. The placenta was attached to the tube and broad ligament, with firm pedicle, so that it was easily removed. The sac was adherent over the anterior abdominal wall and to the omentum which gave rise to some hemorrhage. The whole sac with placenta was removed, and the woman recovered. The child unfortunately died of hemorrhage following ligation of the cord by the nurse, to whom the baby was turned over at the time of the operation.

Dr. Joseph Taber Johnson, Washington, D. C.: I had a case of ectopic gestation about ten years ago. The woman was supposed by those who saw her before I did to be twelve months pregnant. The nature of the case was not clearly understood and at the operation doubt was expressed as to whether there was pregnancy or not, but there was a large tumor on the side of the uterus. This was enucleated without breaking the sac, which was found to contain a full-grown fetus, weighing nine pounds. The abdomen was closed without drainage, as there was nothing to drain. The patient made a good recovery.

Report on Vaccine Therapy in Gynecology and Obstetrics

Dr. J. Whitridge Williams, Baltimore; Dr. Edwin B. Cragin, New York, and Dr. Franklin S. Newell, Boston, constituted the committee that made this report. The evidence at present available seems to justify the following tentative conclusions concerning the value of vaccine therapy in gynecology and obstetrics:

1. Opsonins undoubtedly play a part in the production of active immunity. On the other hand, the determination of the opsonic index is technically very difficult, and is subject to such variations that it is not available as a diagnostic or prognostic guide, and even among trained bacteriologists there is considerable skepticism as to its practical value.

2. Immunization by means of vaccines is a well-established prophylactic measure against certain infectious diseases, notably typhoid, cholera, plague and dysentery. Vaccine therapy is undoubtedly a valuable remedial agent in local infections due to the tubercle bacillus or staphylococcus, less so in local infections due to other pathogenic bacteria, while there is considerable doubt as to its efficiency in acute general infections.

3. In chronic gonorrheal arthritis and urethritis it is a valuable adjunct to other treatment, and occasionally may lead to cure alone. It appears to be useless in the acute infections, while it is more efficient in the treatment of vulvovaginitis of children than any other means, but even here it does not always result in cure.

4. In infections of the urinary tract, especially those due to the colon bacillus, it sometimes results in symptomatic cure, but rarely relieves the bacteriuria. The scanty reports concerning the pyelitis and the pyelonephritis of pregnancy indicate that vaccine therapy is no more efficient than the usual treatment by rest in bed and the administration of salol or hexamethylenamin, as in neither does the bacteriuria disappear until after the termination of pregnancy.

5. In certain cases of endometritis it appears to reinforce the curative influence of curettage. The reports concerning its use in pelvic inflammatory diseases are too scanty to justify conclusions, but it would seem that it may be of value only in chronic postoperative cases with sluggish fistula formation.

6. As the ordinary localized puerperal infections, irrespective of the nature of the offending bacteria, tend to spontaneous cure, the field for vaccine therapy is practically limited to acute general infections, whereas they unfortunately appear to be of little value, and the most that can be said from the reports thus far available is that their employment does no harm.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

How "National Leagues" are Organized

The following editorial from the Joliet (Ill.) *Weekly News* is interesting in connection with the recent campaign of newspaper advertising and spasmodic publicity directed against the public health bill introduced by Senator Owen. No doubt many of the names of the so-called "directors" of the local organizations inspired by this league have been secured through misrepresentation or without the signers knowing the significance of the organization which they were endorsing:

PUBLIC HEALTH

A surprising opposition to the proposed department of public health is being sprung on the congressmen. At first the source of the many letters and telegrams was unknown, but later developments revealed that it is a concerted effort on the part of the new schools of medicine or healing—osteopaths, mental healers, Christian scientists and other enthusiastic opponents of regular medicine.

Those who make a discovery in healing, though it is but a cure for a boil or a sore thumb, become very enthusiastic and apply their method to every form of affliction from consumption to a broken neck, and are impatient with those who hold to other methods. It is not only so in medicine, but it is true of all lines of skill and science. The new brooms are enthusiastic.

A young man came to the *News* office recently and asked the editor to join in a movement for public economy, the curtailment of extravagance, abolition of graft, but being somewhat interested in those lines for a number of years, and believing that present methods were doing at least something, the editor held aloof. The young man added this postscript: "Well, to be frank about this matter, I suppose this organization has a purpose to defeat the movement for a department of public health now before congress. You know it provides another place for politicians and grafters."

"Now, surely, I cannot see my way clear to join your lodge," said the editor. "For many years I have felt that our greatest waste in natural resources was the waste of the man himself. With all of our present-day knowledge and boastful enterprise, we permit people to run these streets afflicted with diseases more deadly than leprosy. We permit conditions in public conveyances that scatter other contagious diseases. We eat tainted food and drink tuberculous milk, and, in short, waste human life more than we have wasted our forests or soil.

"At this office we are thorough believers in the preservation of our natural resources, our forests, streams and soil, and believe in their improvement, but above all we believe in the preservation and improvement of man himself. For years we believed there was something wrong in the plan of government that permitted these things and we looked to the general government for a remedy. We need the aid of the government to check the bubonic plague. For ten years, San Francisco, with the assistance of the government, has held the plague at bay. The government discovered the source of yellow fever and malaria and now it is after the hook worm and pellagra. The government is doing well, but it should do better.

"Young man, when you came to the *News* office with a scheme to defeat the government in the greatest work of the century, you got into the wrong box."

Senator Owen's Speech on the Public Health Bill

The *Congressional Record* for May 25 contains a short statement made by Senator Robert L. Owen on that day in the United States Senate regarding the public health bill. Senator Owen's statement is so concise and conclusive that it is printed entire for the information of those of our readers who may not have access to the *Congressional Record*. The attack through the newspapers of the country of the Owen bill on the ground that it has any bearing whatever on the licensure of physicians can be the result only of ignorance or mendacity, since any intelligent person knows that the licensing of physicians, like the regulation of any profession or trade, is a function of the state and cannot possibly be assumed by the national government. Equally foolish was the statement made before the Senate Committee on Public Health by one Frederick A. Bangs, who stated that he represented the "Voters and Tax-Payers' Association," which organization under questions from the committee proved to have been organized in the last ten days for the sole purpose of opposing the Owen bill. Mr. Bangs said that "behind this bill lies the power of the United States, if it is passed, to compel them (the people) to take any kind of medicine the regular doctors may insist that they shall take." Following this surprisingly illuminating statement, Senator Martin, chairman of the committee, said, "I am amazed that any intelligent man would intimate for a moment that there is anything in this bill that would compel anybody to take any medicine at all." Such was the exhibition of ignorance before the committee on the part of the opponents of the bill that its chances of passage have been greatly improved by the last hearing.

Senator Owen's speech follows:

DEPARTMENT OF PUBLIC HEALTH

Mr. President, I have been amazed, and I suppose that every Senator on this floor has been, to receive many telegrams from "homeopaths," "osteopaths," "eclectics," "chiropractics," and practitioners and believers in Christian Science and suggestive therapeutics, and from other good citizens, protesting against a department of public health apparently on the unfounded notion that the bill introduced by me (S. 6049) proposed or made possible some interference by the federal government with the practice of medicine and constituted a possible invasion of the medical freedom of the citizen to employ whom he pleased when sick. None of the protests point out the language of the bill by which this could possibly happen, and for the obvious reason that no such language exists in the bill. None of these protests suggest any amendment to correct either an error of omission or commission in the bill. They simply protest against an interference with the medical freedom of the citizen, with which the bill contemplates no interference, with which the federal statutes cannot interfere within any state.

I understand that during the last week a large number of so-called "taxpayers' and voters'" associations have been organized with many members in several states of the union for the purpose of opposing a department of public health.

I am informed that the sudden and surprising interest of the "taxpayers and voters" of the United States who are organized in this artificial manner and the active interest alleged or manifested of the "homeopaths" and of the "osteopaths" and of the "eclectics" and of the great variety of those who have special views with regard to the various methods of healing the sick has taken place within seven days, and like a flash of lightning telegrams are coming in from Maine to California. The chairman of the Committee on Public Health and National Quarantine of the senate received a very large number of them. Such sudden universality of disapproval of a department of public health on such an unsound theory is astounding; it is more, it is extremely suspicious; it is obviously artificial; it is perfectly apparent that somebody is spending a very large amount of money on this sudden propaganda; it can hardly be doubted that somebody, in gross error, is advising the "homeopaths," the "osteopaths," the "eclectics" that their right to practice medicine is about to be invaded by the federal *government*.

The agency through which this propaganda is being carried on against a department of public health is carrying the flag of "medical freedom."

And an active and authorized representative of this organization in the *Washington Post* is quoted as saying (Friday morning, May 20, 1910):

> I believe the creation of a federal department of health would mean the abridgment of long-cherished rights of the people, which would mean the taking away of the enjoyment of one of the most sacred rights for which man has had to contend—the right to select the practitioner of his choice in the hour of sickness. If such a bill became law, hundreds of practitioners would be thrown out of practice, men who have succeeded in curing persons who have been given up by physicians. It would particularly affect Christian Science healers and osteopaths. In their line, both *these classes* of practitioners undoubtedly have done a world of good, and they should not by unfair legislation be outlawed. It should make no difference whether we believe in Christian Science, osteopathy or any other practice, the people should have the privilege of choosing their own practitioners. They should not be prohibited from so doing by legislation.

This is an astonishing and utterly impossible interpretation of the bill which I introduced in the senate of the United States proposing a department of public health.

The bill itself merely brings the various bureaus affecting the public health in one body, under one head, without changing the character of the activities or authorities of such existing bureaus, to wit:

> All departments and bureaus belonging to any department (excepting the army and navy) affecting the medical, surgical, biological, or sanitary service, or any questions relative thereto, shall be combined in one department.

The greatest of these bureaus dealing with the public health is the Bureau of Public Health and Marine-Hospital Service, but various public hospitals, the Bureau of Chemistry and of pure foods and drugs, and bureau of meat inspection, including some 16 laboratories of the federal government, are to be transferred to one department by this proposed bill.

Nobody has heretofore protested against the existence of these bureaus or their functions.

Nobody has declared them unconstitutional.

Nobody has charged that they in any wise have interfered with the homeopaths, osteopaths, eclectics, Christian Scientists, or any other school of healing.

Nobody has contended that they would do so, or has desired that they should be abolished for fear that they would interfere with the local practitioners in the gentle art of healing.

No man who has any knowledge of constitutional law would believe it possible that the federal government could invade the police powers of the state, or in any way interfere with the liberties of the citizen or of the local practitioner.

The Supreme Court has repeatedly passed on this question, and held that the states, under their police powers, exclusively control such matters. All lawyers are familiar with these principles. The leading cases I insert in the *Record* for the convenience of those who may not be familiar with the matter:

> United States, *v.* De Witt (9 Wall., 41); Slaughterhouse cases (16 Wall., 36); United States *v.* Reese (92 U. S., 214); United States *v.* Cruikshank (92 U. S., 542); Munn *v.* Illinois (94 U. S., 113); Civil Rights case (19 U. S., 3).

All citizens know that the states exclusively control the issuance of licenses to practice medicine.

Nobody ever heard of the federal government considering such a matter or pretending to have any interest in it.

Every member of the Senate and the House of Representatives knows that the federal government has nothing to do with the local practitioner or the hostilities which may exist between different schools of medicine, if any such do exist.

I wish, however, to put in the *Record* my assurances to the members of the medical profession, of whatever school of healing, a few facts which I trust may abate any apprehension on this score.

First. Senate bill 6049, proposing a department of public health, was drawn by me without the knowledge of any school of medicine or of any medical association. I was greatly pleased to find that many members of the various medical schools and associations, including homeopaths and eclectics, approved the bill.

I have been pleased to observe the wholesale cordial support of osteopaths and men of all schools of healing for a department of public health. The bill contains no provision either directly or indirectly interfering with any school of healing, whether osteopaths, homeopaths, eclectics, Christian Scientists, or in those who reject all medicine. It could not accomplish such a purpose if it had the intent, as the federal government has no such police powers within the state, the states alone issuing licenses to control the practice of medicine and religious and personal freedom being a constitutional right in which everybody believes.

As the author of this bill I wish to say that I believe the more a man knows about the laws of health the less drugs he takes. I have employed homeopaths and osteopaths and allopaths as well to treat myself and the members of my family. I have studied the doctrine of suggestive therapeutics and of Christian Science with great interest and respect, and cordially indorse Horace Fletcher as the best doctor of them all. I stand firmly for medical freedom and for the right of the citizen to select his own medical or spiritual adviser.

The department of health, proposed by me, has for its object the prevention of sickness, and therefore taking business away from all doctors.

The members of the profession whose hearts are constantly wrung by the grief and sorrow at the bedside of sickness and death naturally desire to prevent bad health and illness, even if it be to their financial loss, as it evidently is, and every member of the noblest of professions will stand for the department of health when its purposes and its constitutional limitations are well understood.

The absurd theory that any medical association could, by any possibility, take charge of the health activities of the government of the United States and interfere with the medical freedom either of citizen or practitioner is preposterous.

It is to the honor of all the members of this sympathetic and self-sacrificing profession that they are so largely interested in preventing disease and thus diminishing the need for their own employment. All disciples of every school of healing, I should think, should engage in a generous rivalry to put an end to disease and prevent tuberculosis, typhoid and yellow fevers, bubonic plague, pneumonia, and the many diseases which are known to be preventable.

This is about all a department of health can hope to assist in, and it can only do this by cooperating with the states on constitutional lines in educating the people on the elementary laws of health and well-ascertained facts relating to the prevention of the wholesale sickness and death of our people.

It is beyond belief that any of our good citizens engaged in curing the sick would seriously oppose the reasonable exercise of either the state or national activities within their constitutional limits for the prevention of the illness and death of our people.

Medicolegal

Doctrine of Privileged Communications—Commenting on Not Calling Physician as Witness Not Allowed—Definition of "Physician"—Persons Not Prohibited from Making Disclosures

The Supreme Court of Indiana says, in William Laurie Co. vs. McCullough (90 N. E. R. 1014), a personal injury case brought by the latter party, that it is provided by the Indiana statute that: "The following persons shall not be competent witnesses. . . . Fourth. Physicians, as to matter communicated to them as such by patients, in the course of their professional business, or advice given in such cases." The statute was designed to subserve the good of society, and to promote a full disclosure of all facts and conditions necessary to a correct diagnosis and proper treatment of human ailments, by securing the patient against involuntary disclosure of information given in confidence. The prohibition of the statute is absolute in its terms, yet its provisions were made for the protection of the patient, and the privilege of secrecy granted may be waived by the one directly concerned. It is manifest that in many instances the physician may acquire, by virtue of his office, only such information as might, with propriety and without embarrassment to the patient, be published to the world; while in other cases a disclosure would be revolting to the sensibilities of the public, and injuriously affect the business and social standing of the patient in the community, without any countervailing good results. It is obvious, therefore, that the patient may with good reasons be clothed with a discretion to waive the privilege of secrecy. The purposes of this statute are broader than the exigencies of any given lawsuit, and in the legislative judgment the considerations of public policy and general advantage to mankind from the establishment of inviolable confidence between physician and patient outweigh the private interests of any particular litigant.

In electing not to call his physician as a witness it is clear that a party may have motives and potent reasons in no way involving the suppression of evidence prejudicial to his interests in the case on trial. The law grants to a patient the unqualified right to exclude the testimony of his physician as to facts acquired in confidence, and the exercise of this privilege cannot be impaired by allowing opposing counsel in argument to impugn his motives or charge him with suppressing important and relevant evidence. The general rule, authorizing an inference from withholding of important and material evidence on the matter in issue, that such evidence if heard would be prejudicial to the cause of the party having it in his power to produce the same has no application to privileged communication which the law excludes on ground of public policy. The court in this case properly denied counsel for the defendant company the right to comment on the plaintiff's failure to call a physician, who had treated her, as a witness in her behalf, and in directing the jury to disregard the statement made on the subject, when in the course of his argument to the jury he asked why did she not have the physician there to testify, if she did not have curvature of the spine. The holding in the case of City of Warsaw vs. Fisher, 24 Ind. App. 46, to the effect that adverse counsel have a right to comment on the failure of a party to avail himself of the testimony of his physician is disapproved.

But, prior to the time of receiving the injuries for which she sued in this case, the plaintiff, on the advice of a physician, took treatment, consisting of gymnastic exercises, of a superintendent of a gymnasium and orthopedic institute. The defendant introduced him as a witness, and offered to prove by him that he knew of the plaintiff's physical deformity and infirmities, both from his own examination and from what she told him while under his care. The superintendent had never applied for or received a physician's license, and was not a physician as defined by the Indiana statute. The offered evidence was excluded as privileged under the provisions first quoted, excluding physicians as witnesses "as to matter communicated to them, as such, by patients, in the course of their professional business." This was error. "The word 'physician' is defined to mean a person who has received the degree of doctor of medicine from an incorporated institution; one lawfully engaged in the practice of medicine." 30 Cyc. 1544. It is made unlawful for any one to practice medicine in Indiana without first obtaining a license so to do; and practicing medicine without license is punishable as a misdemeanor. Information gained by a physician while in attendance on his patient was not privileged at common law, and the state statute, being in derogation of the common law, is not to be enlarged by intendment. It manifestly relates to general practitioners and those only whose business as a whole comes fairly within the definition of "physician." By the terms of the statute in some of the states the ban of secrecy is extended only to information given to persons "authorized" to practice physic or surgery; but, as we have seen, the word "physician" includes those only who are "lawfully" engaged in the practice of medicine, and therefore duly authorized to pursue that vocation. This is the sense in which it is used in the Indiana statute. It will not be presumed that this exceptional privilege was intended to apply to transactions between citizens and charlatans or impostors, whose business is conducted in violation of the law, nor can it be extended by construction to persons employing other curative processes not coming within the ordinary meaning of the term "practicing medicine."

It has been held that a statute prohibiting any person authorized to practice physics or surgery from disclosing any information acquired while attending in his professional character had no application to dentists, or to a druggist furnishing medicines to a person applying for the same, or to a veterinary surgeon. The statute of Colorado excludes the testimony of physicians authorized under the laws of that state, and the evidence of physicians authorized to practice in another state was held competent. The New York courts hold that when a party seeks to exclude evidence under a statute similar to that of Indiana, the burden is on him to bring the case within its purview. The superintendent referred to was not a "physician" within the meaning of that word as used in the Indiana statute under consideration, and made no claim to be such, and the information which he acquired while giving the plaintiff a course in gymnastic exercises was not privileged.

Death of Injured Hay-Fever Patient Right After Administration of Antitetanus Serum

The Supreme Court of Minnesota says, in the case of Gardner vs. United Surety Co. (125 N. W. R. 264), that the insured, while in a stable, was kicked by a horse. His thigh was cut, and the evidence indicated that he was thrown and struck his head against some part of the barn. After the accident he appeared to be in great distress, and a physician was summoned, who, after dressing the wound, suggested, as stables were fruitful breeding places of tetanus germs, it might be well to administer an injection of antitetanus serum, although expressing the opinion that there was not one chance in a million that tetanus would ensue. The man consented, and toward the evening of the following day the physician injected the serum. Immediately after the man was seized with a fit of sneezing, and died within a few minutes. A postmortem examination disclosed that his lungs and bronchial tubes had been completely filled through regurgitation. It also disclosed some injury to the head, which it was claimed was severe enough to have produced concussion of the brain.

The beneficiary suing to recover the insurance, which was against injuries through "external, violent and accidental means," introduced evidence tending to support her claim that the injury received was sufficient to cause a shock, impairing the nervous system to such an extent that the regurgitation of the contents of the stomach ensued, causing death by suffocation, and, further, that the injection of the serum was the proper treatment indicated after the accident, and, even if such treatment caused the filling of the lungs, death was still by suffocation, of which the accident was the proximate cause. The company, on the other hand, contended that death resulted solely from the injection of the serum, which treatment was not necessarily indicated by the injury received, but was at most because of a possible infection of the wound which the attending physician deemed it prudent to guard against; that such treatment was improperly administered to the insured, who was afflicted with hay fever, and that the injection of the serum was the proximate cause of the death, and was not external, violent or accidental within the meaning of the policy.

The court does not agree with the contention that death from suffocation is in every case, except where such result is intended, to be regarded as produced by external, violent and accidental means. But the appeal must be determined by considering whether the injuries received were the proximate cause of death on the following day; that is, was the administration of the serum an independent supervening cause of death, or was it to be considered one of the possibilities within the contemplation of the parties at the time the contract of insurance was entered into? The parties contemplated that the individual injured would act as an ordinary normal person, and that a physician would be called, whose judgment would be relied on for the treatment to be administered; and where, as in this case, a reputable member of the medical profession was called, and his treatment was regular, ordinary, and in accordance with the teachings of his profession, there can, it seems to the court, be no escape from the conclusion that the treatment administered was a natural and anticipated result of such injury, and that although death might not have resulted, had no injection of serum been made, the original injury, confessedly received under conditions within the terms of the policy contract, must be held to be the proximate cause of death.

The evidence did not conclusively show that, even if the insured was afflicted with the disease known as "hay fever," the injection of the serum would be fatal; and it followed that the jury were properly instructed that the plaintiff was entitled to recover if the treatment given was rendered necessary and proper by the injuries, and that death resulted solely from the injuries and the injection of the serum.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

June 5

1 *The Relation of the Nervous System to Diseases of the Skin. J. A. Fordyce, New York.
2 A Possible Method of Infection in Acute Poliomyelitis. N. M. Shaffer, New York.
3 *The Glycyl Tryptophan Test for Carcinoma of the Stomach. W. G. Lyle and P. A. Kober, New York.
4 Skiagraphy of the Stomach. J. Rudis-Jicinsky, Cedar Rapids.
5 Open Operation for Congenital Luxation of the Femur. B. M. Ricketts, Cincinnati.
6 The Home as a *Factor in the Medical Inspection of School* Children. J. Sobel, New York.
7 [illegible] Calculus Attached to Catheter in [illegible] Removed by the Suprapubic [illegible] H. W. Austin, Stapleton.
8 [illegible] in Anesthesia. R. H. Greene, [illegible] York.
9 Enumeration of Spermatozoids. A. L. Benedict, Buffalo.

1. **The Nervous System and Skin Disease.**—Fordyce summarizes the rôle of the nervous system in the production of skin diseases by the statement that from the higher centers in the brain to the peripheral distribution of the nerves the skin may reflect circulatory or trophic disturbances some of which are typical and others only suggestive of a relationship. In the one case the etiologic factor is single and specific and in the other the rôle of a nervous influence is only contributory in a complicated causation which our present knowledge does not permit us to interpret in an exact manner.

The nervous system is directly concerned in sensory disturbances, as the hyperesthesias, anesthesias, and paresthesias. The posterior root ganglia and their analogues the Gasserian and geniculate ganglia, together with the peripheral nerves are concerned with the most characteristic skin lesions due to primary nerve involvement. Next to these are the skin lesions of syringomyelia, the changes which follow disease of the peripheral nerves in leprosy, and other forms of neuritis, or after division, partial or complete, of nerve trunks.

The nervous system may act as a predisposing or contributory cause in eczema, dermatitis herpetiformis, lichen planus, pemphigus, etc., by lowering the nerve tone. Psychic shock, mental strain from anxiety, grief or overwork are states which are often invoked in such conditions.

Hysteria leads to self-mutilation—the so-called feigned eruption—sensory disturbances, and possibly to spontaneous bullous affections and gangrene. The nervous system through the sympathetic, the adrenals and other chromaffin tissue related to the sympathetic, may be concerned in pigmentary and leucodermatous changes.

3. **Glycyl-Tryptophan Test.**—The authors applied the test in 21 cases in 11 of which the value of the test was shown at operation. In 5 of these 11 cases the test was negative, although the clinical history was positive, and at operation the stomach was found normal, the carcinoma or other condition being situated elsewhere. Of the remaining 10 cases, not operated, 3 gave a positive test. Two were cases of pernicious anemia and one was a case with stomach symptoms, which was lost sight of. In two cases diagnosed as carcinoma and two of possible carcinoma, the test was negative. In a case of cerebral syphilis, one of neurasthenia and one with stomach symptoms the test was negative. A repeated negative reaction is regarded as most valuable. However, when the test is positive, the complication of a regurgitation of trypsin must be thoroughly investigated.

Boston Medical and Surgical Journal

June 2

10 *Graves' Disease. J. G. Mumford, Boston.
11 Tonsillectomy with Special Reference to Recent Points in Technic. O. A. Lothrop, Boston.
12 The Therapeutic Value of Lactic Acid Bacteria. L. S. Medalia, Boston.
13 *Treatment of Emphysematous Gangrene Due to *Bacillus Aerogenes Capsulatus*. R. H. Gilpatrick, Boston.

10. **Graves' Disease.**—Mumford reviews both the medical and surgical methods of treatment and summarizes his article as follows: 1. Graves' disease is due to abnormal activity of the thyroid gland; 2, in advanced Graves' disease, degenerative changes in the thyroid gland may lead to a shifting symptom-complex ending at last in the positive signs of myxedema; 3. the histology of the gland in Graves' disease indicates shifting, advancing and retrograding symptoms; 4, an enlarged thymus is nearly always found post-mortem in patients dead of Graves' disease; 5, advanced Graves' disease may exist without the presence of all the classical symptoms; 6, Graves' disease can nearly always be cured if taken early; 7, the sera of Rogers and Beebe cure a goodly percentage of cases; 8, through hydrobromate of quinin (neutral), as used by Forchheimer and by Jackson, a large percentage of improvements and of cures was found; it is a pity so few cases have been reported; 9, the great and increasing experience of qualified operators is showing that more than 70 per cent. of Graves' disease patients are now being cured by partial thyroidectomy, and the percentage of such cures is rising; 10, treat the cases seen early by rest, by sera and by hydrobromate of quinin; if no improvement results in two months, operate by thyroidectomy, and always regard the operation as the surest one.

13. **Emphysematous Gangrene Due to Bacillus Aerogenes Capsulatus.**—After a review of the literature, Gilpatrick gives his experience with lactic acid milk and draws the following conclusions: 1. Lactic acid milk when prepared at home from tablets is unreliable as to taste and bacterial contents. 2. The objection to the use of the tablets in their dry state is their unreliable bacterial content, the loss of viability of organisms in their dry form, and the high price. 3. Buttermilk, pure and simple, when obtained from the dairyman, varies considerably as to taste (at times very sour, sometimes bitter) and bacterial content and is, therefore, unreliable. It is also deprived of the principal nourishing elements of milk. (The buttermilk as obtained from the dairyman is a side product with him, is the watery fluid left after churning the butter and as such probably not much attention is paid to its keeping, handling, etc.) 4. The Bulgarian lactic acid bacillus (*B. bulgaricus* so highly recommended by Metchnikoff produces too much acid, which taste is not tolerated by most patients. For this reason Metchnikoff is advocating now the use of the paralactic organism mixed with the *B. bulgaricus* in order to obtain a better tasting soured milk. Which of these two organisms is responsible for the good results cannot be definitely determined, as the *B. bulgaricus* does not grow readily at room tempera-

ture and is, therefore, outgrown by the paralacticus, which grows most readily at room temperature. It might be safe to say that the beneficial results are apparently due to the latter. 5. A good, clean soured milk can be obtained by means of any lactic acid organism in pure culture implanted in sterilized but not boiled milk. The palatability, however, being an important factor, makes it necessary to choose the organism best suited for this purpose. 6. The therapeutic value of soured milk depends chiefly on the lactic acid organisms it contains as well as on the fact of its being a good food article, and not on any particular kind or variety of the lactic acid organism. Any clean, palatable milk properly soured would answer the purpose. 7. A good tasting buttermilk can be prepared at home from sterilized milk with a "starter" of lactic acid organisms. One starter will last for several weeks or months if the directions for the preparation described in the article are carefully followed. A new starter should be obtained on the first sign of contamination detected in taste or in change in the manner of curdling. 8. The *B. bulgaricus* in pure culture in dextrose bouillon as a therapeutic application in infectious processes, although of benefit in certain conditions as a good local antiseptic, is not a cure-all and must be used with caution. In the oral cavity it should be used with great care, if at all, because the action of the lactic acid on the enamel may give rise to caries. 9. Public safety demands that the various buttermilks or soured milks in the market should be thoroughly inspected by the health and pure food authorities.

Lancet-Clinic, Cincinnati

May 21

14 The Appendix in Inguinal Hernia. F. W. Bailey, St. Louis.
15 Tumor of the Pons. P. Zenner, Cincinnati.
16 Case of Extrauterine Pregnancy. F. M. Barden, Hamilton, Ohio.

Kentucky Medical Journal, Bowling Green

May 15

17 Eye, Ear, Nose and Throat Work in Europe. W. J. Leach, New Albany, Ind.
18 Surgical Diagnosis. J. W. Price, Jr., Louisville.

Pennsylvania Medical Journal, Philadelphia

May

19 *The Problem of the Public School from the Medical Point of View: Studies and Their Effects on the Nervous System. L. M. Hartman, York.
20 *School-Houses and School Habits, and the Physical Development of the Body. T. G. Simonton, Pittsburg.
21 *Medical Oversight of Public Schools. H. H. Herbst, Allentown.
22 *The Knowledge of Most Value to School Children. G. W. Wagoner, Johnstown.
23 *A Method of Implanting Ovarian Tissue in Order to Maintain Ovarian Function. W. L. Estes, South Bethlehem.
24 *Conservative Treatment of Pyosalpinx. J. W. Luther, Palmerton.
25 *Causes, Symptoms and Differential Diagnosis of Pyosalpinx. B. M. Anspach, Philadelphia.
26 *Successful Experience in the Immediate Operation for Ruptured Extrauterine Pregnancy. G. E. Shoemaker, Philadelphia.
27 Mine Injuries Affecting the Eye. J. B. Corser, Scranton.
28 Intestinal Parasites. J. M. Swan, Watkins, N. Y.
29 The Extent of Prevalence, the Etiology and Treatment of Amebic Dysentery. J. A. Nydegger, U. S. P. H. and M.-H. S.

19 to 22. Abstracted in The Journal, Oct. 16, 1909, p. 1322.

23 to 26. Abstracted in The Journal, Nov. 13, 1909, pp. 1672, 1673.

Southern Medical Journal, Nashville

May

30 Phases of the Diagnosis and Treatment of Non-Malignant Prostatic Obstruction. B. Lewis, St. Louis.
31 *Subphrenic Abscess. A. B. Cooke, Nashville.
32 Transposition of the Viscera. R. W. Billington, Nashville.
33 The Higher Mission of the Doctor. J. L. Crook, Jackson, Tenn.
34 *A New and Efficient Suture, Useful in Appendectomy. G. S. Foster, Manchester, N. H.
35 Pellagra, with Points on Prognosis. J. H. Randolph and R. N. Greene, Chattahooche, Fla.
36 A Plea for Legislation Having for Its Object the Prevention of Ophthalmia Neonatorum. H. H. Martin, Savannah, Ga.
37 Tuberculous Arthritis. A. G. Nichol, Nashville.
38 The Treatment of Chronic Aural Discharges. P. Calhoun,
never applied for [illegible]ion in the South. C. Tompkins, Richmond, Va.
not a physician as de F. C. Walsh, San Antonio, Texas.
evidence was excluded as [illegible]URNAL, May 7, 1910, p. 1573.
quoted, excluding physicians [illegible]ppendectomy.—During the entire
municated to them, as such, b[illegible]ndix, cecum and mesenteriolum
professional business." This [illegible] needed. This in itself is cer-
cian' is defined to mean a perso[illegible]

tainly a marked advantage. Foster's preference for material used is either medium-sized linen or intestinal silk. The needles should be very small, with a tri-cutting edge point and a short curve. The suture should be about sixteen inches in length, with a needle threaded at each end, the thread secured by a single knot. One of the needles is passed through the mesenteriolum as near the proximal end of the appendix as possible. This suture is then tied, while the assistant holds the attached hemostat in the left hand and lifts the free margin of the meso-appendix, by the aid of tissue forceps, held in the right hand. Following the tying of this suture, the assistant releases the mesenteriolum from the tissue forceps, still keeping the appendix taut by the use of the hemostat in the left hand. The operator then gently grasps the suture in his left hand and with scissors in his right hand cuts the appendix loose from its meso-attachment. Near the base a dry sponge replaces the scissors and the appendix is easily freed fom all meso-attachment. The appendix crusher is then applied to the base of the appendix and after removal of the former the latter is firmly tied with a No. 2 chromic catgut, thus preventing any bleeding from this locality. A fine pointed artery forceps is then made to grasp this catgut ligature as near the appendix as possible, the loose end of the ligature being cut off close to the artery forcep. The needle on one end of the linen suture is then passed just beneath the artery on the meso side of the base of the appendix. The needle is then turned in the opposite direction and encircles one-half of the cecum base about half an inch distant from the base of the appendix, picking up the peritoneal covering of the cecum at intervals of a quarter of an inch until a point is reached on the other side of the appendix, just opposite the meso-attachment. The needle on the other free end of the linen suture encircles the peritoneal covering of the cecum in the same way, but on the opposite side of the appendix base. This part of the suture is continued until it meets and just overrides the end of the half of the same suture coming from the other side. The appendix base is surrounded by a clean, dry sponge and the former crushed twice just above the catgut ligature. The appendix is then amputated, the assistant supporting the stump by the artery forcep attached to the catgut ligature. The appendix stump may be cauterized or not, according to the will of the operator, after which the sponge is removed. The assistant inverts the appendix stump by the use of the hemostat attached to the catgut ligature, while the operator ties the linen suture. Just before the linen suture is completely tightened the assistant loosens the hemostat and withdraws the same, leaving the appendix stump well buried. A second knot is then tied in the linen suture and the latter cut. The operation is then completed, except for closing the abdominal wall incision.

Ohio State Medical Journal, Columbus

May

41 The Progress of Alienism. C. S. McDougall, Athens.
42 Treatment of "Choked Disc": Special Reference to Decompressing Trephining. A. R. Baker, Cleveland.
43 Angioneurotic Edema. Report of Two Interesting Cases. R. A. Bolt, Cleveland.
44 Huntington's Chorea. F. W. Langdon, Cincinnati.
45 Pruritus Ani: Special Reference to Its Treatment with the Roentgen Rays. W. I. Le Fevre, Cleveland.
46 *Differential Cutaneous Tuberculin Reactions in the Diagnosis and Treatment of Tuberculous Lesions by Methods of Prof. C. von Pirquet and D. L. Detre.* A. M. Crane, Marion.
47 Seminal Vesiculitis and Appendicitis. A. W. Nelson, Cincinnati.
48 The Genesis of the Non-Infectious Chronic Diseases of Middle and Later Life from Early Microbic Infection. J. B. Ballinger, Bradford.
49 Phosphatic Casts of Unknown Origin, Complicating Gonorrhea. F. A. Oakley, Cleveland.
50 Congenital Malformation of the Sigmoid with Angulation Due to Adhesions to and Behind the Left Broad Ligament. B. M. Ricketts, Cincinnati.
51 New Method of Gastroenterostomy. E. A. Hamilton, Columbus.

Military Surgeon, Washington, D. C.

May

52 [illegible] Efficiency of Medical Officers in Active [illegible] A. N. Stark, U. S. Army.
53 [illegible] E. Quintard, New York.
54 [illegible] Service of Militia Medical Officers. [illegible]
55 The Study of Cases of Mental Disease from the Standpoint of the Military Surgeon. R. L. Richards, U. S. Army.
56 Varicocele: Its Pathology with Reference to the Soldier and a New Operation for Its Relief. G. M. Blech, Chicago.

57 The Bacteriology of Excrement Used as Medicine. G. W. McCoy, U. S. P. H. and M.-H. S.
58 A Dispensary Ambulance. R. M. Blanchard, U. S. Army.
59 Measurements of the Chest with Tape Measure and Spirometer. L. J. Owen, U. S. Army.
60 Adenoid and Tonsillar Hypertrophies in Recruits. L. T. Lewald, U. S. Army.
61 Opinion Based on History and Progress of Case as to Cause of Disability, and Whether or Not Incurred in Line of Duty. G. H. Richardson, Washington, D. C.
62 The Fahrenheit Hydrometer as a Urinometer. N. Roberts, U. S. P. H. and M.-H. S.

Archives of Internal Medicine, Chicago

May

63 *Bacteriology of Acute Infections of the Respiratory Tract in Children: Special Reference to Influenza. L. E. Holt, New York.
64 *A Modified Method for the Clinical Estimation of Pepsin. W. C. Rose, New Haven, Conn.
65 The Influence of the Ductless Glands on the Pancreas. R. Pemberton and J. E. Sweet, Philadelphia.
66 *The Blood-Pressure in Epidemic Cerebrospinal Meningitis. G. C. Robinson, Philadelphia.
67 Postural or Orthostatic Albuminuria. D. R. Hooker, Baltimore.
68 *Paratyphoid Cholecystitis. R. L. Cecil, New York.
69 Infantilism with Absence of Thyroid and Tumor of Pituitary. I. T. Lemann and R. M. Van Wart, New Orleans, La.
70 Trichinosis, with Recovery of Parasite from the Blood and Muscle. W. H. Mercur and J. H. Barach, Pittsburg.

63. **The Influenza Bacillus in the Respiratory Tract.**—Holt holds that the use of the term influenza should be limited to an inflammation or infection excited by Pfeiffer's bacillus. It is of great importance in all infections of the lower respiratory tract, especially during the cold weather. It has very much less to do with acute nasopharyngeal catarrhs and their complications, otitis, adenitis, etc. It may cause severe general symptoms with few or no local symptoms, even of the respiratory tract; but general blood infection with this organism is very rare. While in most patients the influenza infection causes acute symptoms only, recurrences are exceedingly common, and in some patients the attacks are prolonged, persisting for months. The *B. influenzæ* may be harbored in the secretions of apparently healthy persons for a considerable period, certainly for several weeks; whether such persons may spread the disease is not yet determined. If properly made, cultures are of great value for diagnosis, but the bronchial secretion should be secured.

64. **Clinical Estimation of Pepsin.**—In the Jacoby-Solms method the stomach contents are not neutralized, the estimations are not made under like conditions of acidity. Rose has modified the method in this respect and makes all digestions in a solution whose total acidity is 0.2 per cent. of hydrochloric acid. By this means one determines, not the digestive power of the gastric fluid, but the relative amount of pepsin present. The necessity of knowing whether or not the gastric juice in question is normal in respect to acid before diluting is also avoided.

66. **Blood-Pressure in Epidemic Meningitis.**—Robinson found that heightened intracranial tension appears to be an almost constant phenomenon in epidemic cerebrospinal meningitis. Heightened blood-pressure of a moderate degree, he says, is not infrequently seen in the early acute stage of the disease, when exacerbations of symptoms occur, late in the disease, or when the malady takes on a chronic aspect. The blood-pressure seems to bear some relation to the severity of the disease, being higher when the symptoms are severe, and low during convalescence. The withdrawal of cerebrospinal fluid by lumbar puncture has no constant effect on the blood-pressure, although there is usually a fall of blood-pressure synchronous with this procedure. Robinson concludes that his series of observations affords no definite evidence that heightened intracranial tension causes an increased blood-pressure in meningitis, unless it is late in the disease, when internal hydrocephalus may develop as a result of blocking of the foramina of the fourth ventricle.

68. **Paratyphoid Cholecystitis.**—Interesting features in connection with Cecil's case are the following: (1) The absence of a history of typhoid or paratyphoid fever. Two hypotheses may be advanced in explanation of this: The attack of fever was a very mild one or the case was one of primary paratyphoid infection of the gall-bladder. The marked agglutinative power of the patient's serum. In a dilution of 1/200 there was complete agglutination of her own organism at the end of one hour. The agglutinations were also specific, the serum having little or no effect on the typhoid or paratyphoid bacillus, Type B, but acting readily on other strains of the A type. The agglutination reactions were also positive and specific in the other cases of paratyphoid cholecystitis, to which he has already referred. No paratyphoid bacilli were found in the feces when it was examined 17 days after the operation. Unfortunately no examination was made before the operation or immediately after it. The patient, however, had most probably been a paratyphoid carrier.

Archives of Pediatrics, New York

May

71 Importance of Pediatrics. D. L. Edsall, Philadelphia.
72 Circulatory Failure in the Acute Infections of Children: Causes and Treatment. J. Howland, New York.
73 Education of the Crippled Child. C. Wallace, New York.
74 *A New Sign in Rheumatism of Childhood. J. R. Clemens, St. Louis.
75 Meningitis Complicating Pneumonia. A. Hymanson, New York.

74. **Rheumatism of Childhood.**—Clemens has frequently noticed the enlargement of the thyroid gland in the rheumatic diseases of childhood and now claims for it a place as a sign of rheumatism in the rheumatic series. The time when the thyroid enlargement was first noticed varied. In some cases thyroid enlargement preceded all other manifest signs of rheumatism. Again it has appeared as the fourth or fifth link in the rheumatic chain, and at other times it has been found to persist in association with chronic endocarditis after all other rheumatic manifestations have disappeared. The degree of enlargement of the thyroid gland, while not great, is sufficiently pronounced to give an unnatural fulness to the neck when inspected from the front. When viewed laterally the sharp contour of the gland is unmistakable.

Denver Medical Times and Utah Medical Journal

May

76 Alcohol an Efficient Assistant in the Production of Tuberculosis and Pneumonia. J. M. Shaller, Denver.
77 Eye Strain. D. H. Cover, Denver.
78 Observations and Demonstrations on Spinal Anesthesia. A. W. Morton, San Francisco.
79 Pneumonia. R. J. Smith, Colliston, Utah.

Providence Medical Journal

May

80 Contributions of Medical Men to General Literature. J. H. Davenport, Providence.
81 The Providence City Hospital. D. L. Richardson, Providence.
82 Tuberculosis in Children. P. Williams, Providence.

Journal Michigan State Medical Society, Detroit

May

83 The Value of the Orthodiagraph. J. G. Van Zwaluwenburg, Ann Arbor.
84 Placenta Prævia. E. T. Abrams, Dollar Bay.
85 The Enormous Waste of Human Life. G. H. Cunningham, Detroit.
86 Animal Experimentation and Blood-Vessel Surgery. R. E. Balch, Kalamazoo.
87 The Urgent Need of Operating in All Cases of Hernia. E. B. Smith, Detroit.
88 *The Diagnostic Value of the "Hemolytic Test" in Cancer and Tuberculosis. F. Smithies, Ann Arbor.

88. **Hemolysis.**—The results of Smithies' work comprise observations on 158 cases affected with various ailments and clinically well. The summary shows that of the 158 cases, 26, or 16.4 per cent., revealed positive reaction. Of these 26 cases more than half were cases of malignant disease. The majority of the remainder were syphilitic and tuberculous. The disease conditions generally giving positive reaction were those associated with more or less marked anemia, and in many instances with loss of weight. Of the 158 cases tested, 94, or about 60 per cent., were negative, while 27, or about 17 per cent., were classed as undetermined. Some of these so classed might have been called positive by a more experienced worker. Eleven cases showed "reverse hemolysis." The greater number of these were tuberculous—moderately advanced cases with anemia—but a fair proportion of "reverse hemolysis" was obtained in the cases of malignant disease. Certain facts are brought forward prominently. It seems that in the blood serum of some cases of malignant disease—those generally associated with anemia and loss of weight—there exists a hemolytic property for alien red cells. It also appears that

while this phase is interesting and may be of value in certain individual cases, similar manifestations are possible from the sera of patients non-cancerous. It will be noted, however, that the conditions where this direct hemolysis is obtained are those frequently associated with anemia, loss of weight and cachexia. The reaction of reverse hemolysis mentioned by Crile as occurring in 92 per cent. of cases of tuberculosis is characteristic. It occurs occasionally, but is by no means characteristic inasmuch as it also occurs in malignant disease, syphilis and other diseases.

Journal of Nervous and Mental Diseases, Lancaster, Pa.

May

89 The Sensory Functions Attributed to the Seventh Nerve. C. K. Mills, Philadelphia.
90 The Psychoanalytic Method of Treatment. E. Jones, Toronto.

The Therapeutic Gazette, Detroit

May

91 The Treatment of Chronic Cystitis in the Male. H. M. Christian, *Philadelphia.*
92 The Treatment of Chronic Suppuration of the Middle Ear by the General Practitioner. F. R. Packard, Philadelphia.
93 The Dosage of Gonococcic Vaccine and the Remedial Measures to be Used with It. W. R. Jamieson, Torreon, Mexico.
94 The Practical Utility of the Cystoscope for the General Practioner—Difficulties Encountered in Its Use. B. A. Thomas, Philadelphia.

Southern California Practitioner, Los Angeles

May

95 Surgery of the Thoracic Cavity. W. W. Beckett, Los Angeles.
96 Medical Education. R. N. Looney, Prescott, Ariz.
97 Early Diagnosis of True Gastric Lesions. H. H. Lissner, Los Angeles.
98 Celiac Parotitis. R. Brown, Santa Barbara, Cal.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 21

1 Abdominal Emergencies. E. S. Bishop.
2 The Treatment of Gastric and Duodenal Ulcer. E. L. Spriggs.
3 *Does Gastrostaxis Exist as an Independent Disease? C. Bolton.
4 *Implantation of the Ureters into the Rectum by the Sacral Route. R. L. Knaggs.
5 Intracranial Tumor Relieved by a Decompression Operation. R. Kennedy.
6 Cultural Characteristics of the Microbacillus of Acne. E. H. Molesworth.
7 Achondroplasia. O. Eichholz.
8 General Suppurative Peritonitis: Recovery. H. Cooper.

3. **Gastrostaxis.**—According to Bolton the evidence that gastrostaxis exists is threefold, namely: (1), that at certain post-mortem examinations of patients who have died of hematemesis no lesion has been found in the stomach to account for the bleeding; (2), that at certain operations performed on such patients, an ulcer has not been found; (3), that gastrostaxis possesses a definite clinical history. However, the natural conclusions to which one is driven from a consideration of the condition is that gastrostaxis, as an independent disease, is not yet indisputably proved to exist; and on the other hand, that acute gastric ulcer is a most important and very common malady, and one which is worthy of more consideration than appears to be given to it.

4. **Implantation of Ureters.**—Knaggs reports a case of inveterate vesicovaginal fistula in which the left ureter was implanted and the right kidney removed successfully. One year after the operation the patient was alive and well.

Lancet, London

May 21

9 The Evolution of the Pelvic Floor in the Non-Mammalian Vertebrates and Pronograde Mammals. R. H. Paramore.
10 The History of Injections of Solutions of Sodium. L. Wickham and M. Degrais.
11 The Systematic Investigation of Chronic Affections of the Stomach and Intestines. G. Herschell.
12 *Maternity Cases in the Liverpool Workhouse Hospital. W. Alexander.
13 The Action of Liquid Kolynos on the Bacillus of Influenza. J. F. Beale.
14 *The Treatment of Spasmodic Asthma by the Hypodermic Injection of Adrenalin. B. Melland.
15 *Desiccated Culture Media. E. T. Thompson.
16 The Aims of Medical Education. A. C. Geddes.

12. **Maternity Cases in Liverpool Workhouse Hospital.**—The total number of women admitted during 1907, 1908 and 1909 was 1,330; married, 761; single, 539; primiparæ, 455. Residing in the workhouse for variable times before confinement. 382; admitted direct from town when in labor, 926; admitted from the workhouse lock ward, 22. Of maternal mortality there were six cases due to nephritis, phthisis, pneumonia, syncope and signs of edema of the lungs, sepsis, abscess found in broad ligaments, pus in uterus, probably previous pyosalpinx and eclampsia. Infantile mortality: Mature, dying soon after birth, 22; mature, stillborn, 15; premature and immature, 78; premature and decomposed, 82. Of the mature, the causes of death were debility, cyanosis, syphilis and apnea, but in most of the cases debility was the cause. Of the mothers admitted during 1909, 19 had suffered or were suffering from syphilis. In 6 cases syphilis was suspected, but the grounds for suspicion were not conclusive. Children born: males, 704; females, 653; twins, 27. Presentations: head, 1,272; transverse, 11; breech, 46; knee, 1; foot, 23; face, 4; shoulder, 1; and with cord, 17. Operations: forceps, 57; versions (podalic), 14. Complications: eclampsia, 3; albuminuria, 32; pneumonia, 4; hemorrhage, 45 (accidental 26, unavoidable 15, postpartum 4); adherent placenta, 4; adherent membranes, 5; retained placenta, 1; ophthalmia in infants, 13 (neonatorum 4, catarrhal 9).

14. **Treatment of Spasmodic Asthma.**—Melland claims that the effects from the treatment of the paroxysms of asthma by the hypodermic injection of epinephrin is marvelous. He gives only one injection, 10 minims of a 1 in 1,000 solution. The injection may be repeated if other attacks supervene.

15. **Desiccated Culture Media.**—The preparation of small quantities of culture media is always a tedious process and usually attended with unsatisfactory results. It occurred to Thompson that many of the culture media might be dried and reduced to a powder containing all the requisite solid constituents which would remain indefinitely in an unaltered condition. The culture media under investigation were nutrient gelatin, nutrient agar-agar, nutrient beef broth, and MacConkey's neutral-red bile-salt lactose-agar. These were all evaporated to dryness and when made up to their original volumes with distilled water and dissolved at 100 C., were quite clear, the gelatin, the agar-agar and bile-salt-agar solidifying with their original firmness on cooling. The reaction of the broth before drying, which was + 15 acid to phenolphthalein, remained unaltered after treatment. The agar-agar, gelatin, and broth were each distributed into test-tubes and sterilized; they were then inoculated with several of the pathogenic, saprophytic and chromogenic bacteria, respectively, and without exception vigorous and typical growths were obtained.

The neutral-red bile-salt-agar was distributed in Petri dishes and allowed to dry in the usual manner and then inoculated on the surface with a mixture of *B. typhosus*, *B. coli*, *B. subtilis*, and *B. megatherium* by means of a bent glass rod. No difficulty was experienced in rubbing the surface with the glass rod; in fact, the rubbing was performed a little more vigorously than necessary in order to test the texture of the medium, but it remained unbroken. After 48 hours incubation at 40 C., typical colonies of *B. coli* and *B. typhosus* had developed, the coli colonies being red and the typhoid colonies being colorless. The *B. subtilis* and *B. megatherium* had not grown. Thompson claims that these experiments show that the typical reactions may be obtained with this medium after desiccation and that its inhibitory properties are in no way impaired.

Medical Press and Circular, London

May 4

17 Milk Albumin in the Feeding of Infants. P. A. Bickel and H. Roeder.
18 Ten Years Anesthetic Practice in the Incorporated Dental Hospital of Ireland. T. P. C. Kirkpatrick.
19 The Management and Treatment of Chronic Bright's Disease. T. R. Bradshaw.
20 The Greater Frequency of Stillbirths and Deaths under a Year Among Males than Females. A. S. Dutton.

Clinical Journal, London

May 4

21 Fibrosis of the Abdominal Muscles. G. R. Murray.
22 Medicine on the Continent. H. Campbell.
23 *Two Common Errors in the Administration of Anesthetics. J. D. Mortimer.

23. **Errors in the Administration of Anesthetics.**—The errors referred to by Mortimer are (1) failure to appreciate the importance of choosing an anesthetic suitable to the patient and to the operation; and (2) a failure to appreciate the importance of maintaining a free air way.

24. **Spleno-medullary Leukemia Treated by X-Rays.**—In Hayes' case only temporary improvement was effected by Roentgen-ray treatment.

Dublin Journal of Science

May

24 *Spleno-medullary Leukemia Treated by X-Rays. M. R. J. Hays.
25 Glycosuria and Graves' Disease. W. A. Winter.
26 *A New Pancreatic Extract for the Treatment of Diabetes. W. M. Crofton.
27 The History of the Prevention of Smallpox. T. P. C. Kirkpatrick.

26. **Treatment of Diabetes.**—The extract used in the case reported by Crofton consisted of the expressed juice of fresh pig's pancreas. The juice is kept heated for three hours at 80 C. (176 F.) to precipitate all proteins and to destroy all ferments. The filtrate is then mixed with 25 per cent. of glycerin. The patient gained in weight and improved generally, but the sugar excretion was not affected in any way.

Presse Médicale, Paris

May 14, XVIII, No. 39, pp. 361-368

28 *Treatment of Genital Prolapse in Elderly Women by Bridging the Vagina. (Traitement du prolapsus génital chez la vieille femme par le procédé de cloisonnement du vagin. Opération de Le Fort.) E. Juvara.
29 *Clinical Diagnosis of Cancer of the Testicle. M. Chevassu.

May 18, No. 40, pp. 369-376

30 *Duration of Chronic Nephritis. G. Schreiber.

28. **Treatment of Genital Prolapse by Bridging the Vagina.**—Juvara has applied Le Fort's technic in six cases, the patients all elderly women, and he comments on the simplicity and ease of the technic and the very satisfactory results. He gives ten illustrations of the technic and the outcome in a typical case. The flaps are taken from the front and rear walls of the vagina, the outer edges sutured together, bridging it across and making the lumen smaller, forming a solid support, at the same time leaving a space each side of the bridge for escape of secretions.

29. **Cancer of the Testicle.**—Chevassu reviews the early manifestations of malignant disease in the testicle as he has encountered them in a number of cases. In one case there was merely a slight increase in the size of the gland, the lower two-thirds were abnormally hard and tender with slight irregularity of the surface at the rear. In 3 other cases the testicle was the size of a large egg, the surface smooth or slightly knobby, the consistency elastic and fluctuating or harder above and elastic below, with tenderness above or below, the spermatic cord apparently normal or a little larger and less flexible than its mate. In all these cases the diagnosis long wavered between hematocele, syphilis and cancer of the testicle, until examination of the epididymis showed that this was still intact, which confirmed the assumption of cancer. With other lesions the epididymis is almost certain to be early involved. When hesitating between the diagnosis of hematocele and cancer, he adds, it is well to bear in mind that the chances are nine to one in favor of the latter. A syphilitic lesion may simulate cancer of the testicle, but specific treatment soon clears up the diagnosis. If no benefit is derived from a week of daily mercurial injections, operative treatment is indicated without further delay. In the first case the cancer was removed in an early stage with every prospect of complete cure, but the patient, a young soldier, succumbed in 18 months to glandular metastasis in the abdomen. This and similar experiences suggest the necessity for systematic removal of the aortico-lumbar glands as the indispensable supplement to castration for malignant tumor in the testicle.

30. **Duration of Chronic Nephritis.**—In the case reported the patient, a woman of 62, developed mitral stenosis after acute rheumatism at the age of 20; this was followed five years later by symptoms of nephritis from lead poisoning. Albuminuria persisted for 33 years before serious symptoms from the nephritis developed, although there was no attempt at restriction of the diet during these years. Schreiber cites a number of instances on record in which the nephritis existed in a continuously latent form for many years, the patient surviving after differentiation of the disease for from 20 to 43 years. Such cases suggest that strict dietetic measures are not always necessary for patients with mild chronic nephritis.

Semaine Médicale, Paris

May 18, XXX, No. 20, pp. 229-240

31 *Accouchement of the Pygopagus, Rosa-Josepha Blazek. C. Trunecek.
32 Teratologic Study of the Pygopagus, Rosa-Josepha Blazek. M. Baudouin.

31. See Vienna Letter, May 14, page 1624.

Archiv für Kinderheilkunde, Stuttgart

LIII, Nos. 1-3, pp. 1-240. Last indexed April 16, p. 1343

33 *Physiology of Infant Feeding. (Beiträge zur Physiologie der Ernährung des Säuglings.) A. Schlossmann.
34 "Salt Fever" in Infants and Elimination of Chlorids. (Unter- [illegible] en. Kochsalzfieber und über die [illegible] äugling.) R. Frieberger.
35 [illegible] Normal Amboceptors in Infant's [illegible] des [illegible] olytischen Normalambozeptoren.) J [illegible]
36 Behavior of the Leucocytes in [illegible] der Leukocyten bei Masern.) K. Neumark.
37 Diphtheria as a Complication of [illegible]
38 Experiences with the Tuberculin [illegible] he Local Reaction to the Subcutaneous [illegible] mit der v. Pirquetschen Cutan- und d [illegible] eaction.) H. Nothmann.
39 *Chronic Primary Progressive Polyarthritis in Children. J. Stargardter.

33. **Physiology of Infant Nutrition.**—Schlossmann thinks that in striving to avoid overfeeding of infants physicians are apt to go to the other extreme, and the result is an *atrophia e medico*, unless the mothers supplement the ordered ration. He protests against determining the proper amounts by comparison with the weight, saying that this leads to erroneous conclusions; the surface area, rather than the weight, should be considered, and when this is done, it is seen that the progress of the child—as evidenced by the elimination of carbon dioxid and consumption of oxygen—parallels the increase in surface area. He tabulates the details in a number of cases, and also emphasizes the importance of refraining from giving too much fluid on account of the danger of demineralization from continued excessive intake of water; it requires unnecessary expenditure of energy, taxing the heart, kidneys, etc., to pass it through the body and eliminate it. No more fluid should be given than corresponds to that of breast feeding.

39. **Chronic Primary Progressive Polyarthritis in Children.**—All the articles in this number of the *Archiv* issue from Schlossmann's clinic for children's diseases at Düsseldorf. Stargardter closes the list with a case of this rare disease. The patient was a child, a little over 10, who lived in a damp house. The joint affection developed at the age of three but no acute phase was ever observed. The joints showed nodular enlargement at various points. By the age of 10 the jaws, spine, right hip and shoulders were the only joints not affected. The trouble was insidious and progressive and the muscles showed extreme atrophy. No benefit was derived from any treatment. Stargardter has found 66 other cases on record in children from 2 months to 14 years old. He discusses the differentiation and the unfavorable prognosis, and remarks in conclusion that the etiology of the disease is as obscure as treatment is powerless.

Berliner klinische Wochenschrift

May 2, XLVII, No. 18, pp. 813-868

40 *The Talma Operation. B. Credé.
41 Experimental Research on Importance of the Thymus for the Animal Organism. C. Hart ar[illegible]
42 Tests for Effectiveness of Steam [illegible] des Torggler-Müller'schen Pa[illegible] Kontrollröhrchen zur Prüfung [illegible] H. Kutscher.
43 *Action of Cod Liver Oil in Rachitis and Spasmophilia. (Zur Wirkung des Lebertrans auf Rachitis und spasmophile [illegible] nstern.
44 [illegible] Albuminuria. (Einseitige orthostatische [illegible] Vorpahl.

45 Albuminuria Resulting from Constipation. (Zur Kenntnis der Obstipationsalbuminurie.) Roubitschek.
46 Autoinhibition of Human Serums. (Eigenhemmung menschlicher Sera.) H. Hecht.
47 Specific Characteristics of Milk Albuminoids. (Artcharakter der Milcheiweisskörper.) J. Bauer.
48 Latest Experiences and Views on Scalp Diseases. (Trichophytieerkrankungen.) C. Bruhns.

40. **Omentopexy.**—Credé has found about 120 cases in the literature in which the Talma operation has been performed during the twelve years since it was introduced in treatment of ascites from obstruction of the reflux of blood through the portal vein. Ascites of other origin is scarcely amenable to this measure, although there is a case on record of cure from it in malarial splenomegaly and in a case of Banti's disease. The number of cures in the total 120 cases is only 40 and the cure proved permanent in only 20. He discusses the cause of so many failures with this logical and promising operation, and reports 5 cases in which he has applied it himself. The result in these cases has convinced him that the ordinary technic is not extensive enough and that greater benefit can be derived when the development of more and larger collateral vessels is insured. He accomplishes this by making a raw surface over the front of the greater omentum, over an area as large as the hand, snipping it with scissors, detaching the peritoneum from the muscles and then suturing; the procedure is thus more radical than Talma recommended. The outcome was a permanent cure in the case related in detail; the ascites has not recurred since the operation, six months ago, although previously up to 11 liters of fluid had been withdrawn at a time and the patient had required frequent tapping.

43. **Action of Cod Liver Oil in Rachitis and Spasmophilia.**—Rosenstern reports from the children's asylum at Berlin in charge of Finkelstein that extensive experience is confirming the specific curative action of cod liver oil in rachitis. In 5 cases with pronounced craniotabes, of which the details are tabulated, remarkable benefit followed administration of 25 gm. of cod liver oil daily for three to six weeks. In the spasmophilic diathesis cod liver oil also displayed marked efficacy. The results were so conclusive that Rosenstern affirms that this method of treatment may be counted on to cure in the majority of cases of spasmophilia, especially when phosphorus is combined with the cod liver oil. Phosphorus in ordinary oil or in an emulsion displayed no influence on the spasmophilia. His dosage is 0.01 part phosphorus to 250 parts of cod liver oil for the severest cases, a teaspoonful five times a day. Cod liver oil without phosphorus seems to have the same effect if given in larger doses. The clinical research reported confirms in every respect Schabad's conclusions, based on study of the metabolism, in regard to the specific action of cod liver oil on rachitis and spasmophilia. Rosenstern estimates the severity of the rachitis by the extent of the craniotabes, representing it by a square that comprises the extreme limits of the softening of the bones, noting how this square grows smaller during the course of the cod liver oil treatment. The severity of the tendency to convulsions or allied phenomena—spasmophilia—is estimated by the electric irritability of the nerves, especially the cathodal opening contraction. This is proving a very accurate index of the severity of the spasmophilic diathesis, especially when the response is compared with the Chvostek sign and other spasms.

Deutsche medizinische Wochenschrift, Berlin

May 12, XXXVI, No. 19, pp. 873-920

49 Diagnosis and Treatment of Extrauterine Pregnancy. A. Martin. Commenced in No. 18.
50 Needle Healed in the Heart. (Zur Kasuistik der Fremdkörpereinheilung im Herzen.) W. Risel.
51 *Operative Treatment of Congenital Spasmodic Paralysis. (Zur operativen Behandlung der angeborenen Gliederstarre—Littlesche Krankheit—mittels Resektion hinterer Rückenmarkswürzeln: Foerstersche Operation.) J. Hevesi.
52 Acroparasthesias. R. Trespe.
53 *Emotions as Cause of Mental Disturbances. (Ueber psychische Ursachen geistiger Störungen.) K. Birnbaum.
54 Percussion of the Apices of the Lungs. F. Klopstock.
55 Technic for Determination of the Tubercle Bacillus. (Tuberkelbazillennachweis.) W. Telemann.
56 *The Pain of Deforming Arthritis. P. Ewald.
57 Edible Clays in Therapeutics. (Essbare Erden und ihre Verwendung als Heilmittel.) Martini and Grothe.

51. **Operative Treatment of Spastic Diplegia.**—Hevesi has applied Foerster's operation, that is, resection of the roots of the posterior spinal nerves, in a very severe case of Little's disease and the surprising benefit confirms all that Foerster claims for the operation. Nature herself points the way to treatment in this line; when tabes develops during disturbances due to interruption in the course of the pyramidal tracts, all the symptoms of exaggerated reflex excitability vanish at one stroke. This is the result of interrupting the reflex arc, and in case of imperfect development of the pyramidal tracts all that is necessary is to sever the connection by resection of the posterior roots. Hevesi's patient was a child of 11 who had never been able to walk without aid. After laminectomy and resection of the posterior lumbosacral spinal roots, 3 or 4 on each side and each for from 2 to 6 cm., the wound healed by primary intention and by the seventh week the patient was able to walk alone. This rapid benefit surpasses even that reported by Foerster who did not commence exercises in standing or walking until after four months. No special sensory disturbances were noted nor ataxia. None of the other measures advocated for Little's disease attacks the true cause; this "rhizectomy" alone accomplishes.

53. **Psychic Causes of Mental Disturbances.**—Birnbaum comments on the way in which the assumption that emotions can develop psychoses is being more and more abandoned. Such causes are able to develop a psychosis only in peculiarly predisposed individuals, especially those of a hereditary degenerative type, and the forms of the psychosis are those that develop on this basis. The psychic impetus may be comparatively trifling.

56. **The Pain of Arthritis Deformans.**—Ewald insists that deforming arthritis may develop without infectious or toxic influences, purely from static disturbances, throwing the joint out of gear. A disturbance of this kind in the foot may react on a joint above, and many are the cases of supposed sciatica that have been cured merely by the use of a flat-foot insole. The joint affection does not cause pain until the synovial membrane becomes irritated, as he shows by three typical examples. The Roentgen rays may show lesions of deforming arthritis for years without pain or functional disturbance, but then pain may suddenly develop from some slight trauma to which a deformed joint is peculiarly exposed. The resulting synovitis causes pain and interferes with the use of the joint, and the inflammation is much harder to conquer than a similar disturbance in a previously sound joint. Weeks of massage and superheated air and passive exercises may be necessary before the patient can use the limb again. These measures do not influence materially the osteoarthritis but they restore the functional use of the limb. The process in the bones may exist without pain for years, but it prepares the soil for the later painful synovitis. He adds in conclusion that deforming arthritis after infectious processes and nervous arthropathies may possess a static factor, and the proliferating process may be regarded as reparatory in its nature.

Deutsche Zeitschrift für Chirurgie, Leipsic

April, CIV, Nos. 5-6, pp. 425-632

58 Causes of Altered Chemistry in Stomach with Gastric Cancer. (Zur Kenntnis des Magencarcinoms.) H. Matti.
59 Torsion and Incarceration of Omentum. (Ueber Netztorsion und Netzeinklemmung.) M. Litthauer.
60 *Influence of Epinephrin on Paralysis of the Vasomotors. (Ueber Infusion von [illegible] bei peri- [illegible] lerzeitigen [illegible] nfektlöser [illegible]
61 Case of Telangiectasia of the Tongue. H. Meerwein.
62 *Postoperative Psychoses. E. Schultze.
63 *Five Cases of Direct Transfusion of Whole Blood. (Ueber Bluttransfusion beim Menschen.) G. Hotz.

60. **Epinephrin in Collapse from Paralysis of the Vasomotor Center.**—Heidenhain quotes many authors to confirm his own experience that in case of collapse from weakness of the vasomotor center, such as is liable in pneumonia, diphtheria and peritonitis, good results may be obtained with a suprarenal preparation injected into a vein, or, diluted with salt solution, injected subcutaneously. In conclusion he reports a case of uncomplicated ileus in which by this means it proved possible to tide the apparently moribund patient past the danger stage after two days of fecal vomiting, and thus permitted a successful operation.

62. **Postoperative Psychoses.**—Schultze reports 12 cases of postoperative psychoses to emphasize the importance of auto-intoxication, inanition and weakness, feeble circulation, etc., as factors in the development of postoperative psychoses. Eliminate these factors and the psychoses become rare indeed. The practical conclusion is evident that every effort should be made to strengthen the patient before attempting the operation. *The prognosis is generally good; only a few of the patients on record were left with a permanent psychosis.* The nature of the operation seems immaterial. In all the cases the mental disturbance improved proportionately to the improvement in the physical condition.

63. **Direct Transfusion of Blood.**—Hotz reports five cases in which severe losses of blood were compensated by direct *transfusion of the whole blood from the artery of another* person sutured directly to the median vein of the patient. A near relative is the best for the purpose, as there is presumably less difference in the composition of the blood. The details of each case are given, the results on the whole being very encouraging.

Medizinische Klinik, Berlin

May 8, VI, No. 19, pp. 731-770

64 *So-called Muscular Rheumatism. A. Schmidt.
65 Spontaneous Gangrene in the Young. H. O. R. Schmiz.
66 Bismuth Intoxication. Windrath.
67 Venesection Indispensable in Medicine. (Der Aderlass, ein unentbehrliches Heilmittel in der Medizin.) O. Burwinkel.
68 Influence of Sea Climate on the Blood Picture. (Einfluss des Seeklimas auf das Blutbild.) O. Hellwig.
69 Practical Importance of Geology for Balneology. A. Leppla.

64. **Treatment of Muscular Rheumatism.**—Schmidt is convinced that the pain in muscular rheumatism is of the nature of neuralgia, and he suggests treating it with injections of physiologic salt solution at the painful points. Peritz has advocated this, and Schmidt's own experience has confirmed the great benefit liable to be derived from injection of 5 or 10 c.c. directly into the muscle at the most painful points. This, he adds, is no etiologic treatment, for the seat of the trouble *is certainly not in the muscle itself, but it relieves the* pain and that is the main thing. In very old or especially violent acute cases he would not hesitate to do lumbar puncture, following with spinal anesthesia if necessary. Even the puncture alone has given great relief in some cases; in others the effect was only transient. He regards lumbar puncture as harmless under proper precautions, and thinks that a trial of it is justified in severe cases.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

May, XXXI, No. 5, pp. 547-686

70 Origin of Accessory Mammae and Ductless Axillary Mammary Glands in Puerperæ. (Kasuistischer Beitrag zur Frage der Genese der Mammae accessoriae und der sogenannten Achselhöhlenbrüste ohne Warze und Ausführungsgang bei Wöchnerinnen.) A. Knaebel.
71 Treatment of Placenta Prævia. E. Hauch.
72 Cause of Obstetric Vulvar Hematoma. (Zur Entstehung des Haematoma vulvae in Geburt und Wochenbett.) M. Hirsch.
73 Transperitoneal and Extraperitoneal Cervical Cesarean Section: 15 Cases. (Zur Frage des suprasymphysären Kaiserschnittes.) M. Lange.
74 *Heating the Pelvis Through by Electric Means: Thermopenetration. (Die elektrische Durchwärmung des Beckens als Heilmittel.) H. Sellheim.
75 *Three Cases of Acute, Non-Puerperal Peritonitis in the Puerperium. (Drei Fälle von nichtpuerperaler, akuter Peritonitis im Wochenbett, durch Operation geheilt.) H. Kritzler.

74. **Thermopenetration.**—Sellheim describes the technic and results of the application of electricity to heat the pelvis evenly throughout. The technic for this thermopenetration, as it is called, permits the passage of the heat without injury of the parts in contact. One electrode is introduced into the vagina or rectum with the other electrode parallel on the abdomen above. By changing the position of the second electrode it is possible to send the heat through all parts of the pelvis. With a current of one ampere the region between the electrodes can be heated to a constant temperature of over 40 C. (104 F.); no by-effects were observed in any case.

75. **Non-Puerperal Acute Peritonitis in the Puerperium.**—In the three cases described the acute peritonitis was conquered by surgical measures as under other conditions. The peritonitis was due to torsion of an ovarian cyst in one case and to appendicitis in the others.

Münchener medizinische Wochenschrift

May 10, LVII, No. 19, pp. 993-1056

76 Growth and Aging of the Large Arteries and Their Relation to the Pathology of the Vascular System. (Wachstum und Altern der grossen Arterien und ihre Beziehung zur Pathologie des Gefässsystems.) R. Rössle.
77 Course and Treatment of Serpentine Ulcer of the Cornea. (Ulcus corneæ serpens.) R. Schneider.
78 New Colorimeter and Its Application in Determination of Hematin, Iron, Indican and Creatinin. (Eine neues Kolorimeter und dessen Verwendung zur Bestimmung von Blutfarbstoff, Eisen, Indikan und Kreatinin.) W. Autenrieth and J. Koenigsberger.
79 *Constancy of Lymphocytosis in Exophthalmic Goiter. (Ueber die Lymphozytose bei Basedowscher Krankheit und bei Basedowoid.) M. Bühler.
80 *Deviation of Complement with Pseudoleucemia. (Komplementablenkung bei Hodgkinscher Krankheit.) A. Caan.
81 Experimental Research on Acute Overexertion of the Heart. (Tierexperimente zur Frage der akuten Herzüberanstrengung.) T. Schott.
82 *Differential* [illegible] *of the Diaphragm and Eventratio*[illegible] zwischen Hernia und Eventratio[illegible]
83 Insignificant [illegible] of the Eye of Iridectomy in Infanc[illegible] der Verminderung des Augenwachstums nach Iridektomie in früher Jugend.) L. Schomberg.
84 [illegible] in Typhoid: 3 Cases. (Hautblutungen [illegible] us abdominalis.) A. Huber.
85 [illegible] the Lungs. W. Hildebrandt.
86 [illegible] rité Hospital at Berlin. (Aus der [illegible] *Krankenhauses zu Berlin.*) K. Sudhoff.

79. **Lymphocytosis in Exophthalmic Goiter.**—Bühler has examined 20 patients with pronounced exophthalmic goiter and 70 patients with an incomplete form of the disease, and found a relative lymphocytosis pronounced in nearly every case. He regards this as an important differential sign of a thyroid toxic origin for the symptoms observed. Examination of the blood thus may prove of great value in aiding in the differentiation of exophthalmic goiter, although negative findings are not conclusive.

80. **The Wassermann Reaction in Pseudoleukemia.**—Caan obtained positive findings in four cases of pseudoleukemia, although there was nothing to indicate syphilis in the antecedents. *These findings speak against the absolute specific* nature of the Wassermann reaction, while at the same time they suggest that the pseudoleukemia may be due to some spirochete action, possibly supplemented by other etiologic factors.

Wiener klinische Wochenschrift, Vienna

May 12, XXIII, No. 19, pp. 685-722

87 *Tests of Kidney Functioning. (Die funktionelle Nierendiagnostik.) V. Blum.
88 *Treatment of Tuberculosis Along Lines Utilizing Nature's Processes. (Neue Ausblicke auf die natürlichen Heilwege der Tuberkulose.) F. Tutsch.
89 Immunity in Active Tuberculous Infection. (Zur Frage der Tuberkuloseimmunität.) R. Kraus and R. Volk.
90 Epinephrin Technic for Determination of Leucocytes in Tissues. (Leukozytendarstellung im Gewebe durch Adrenalin.) C. Kreibich.

87. **Tests of Kidney Functioning.**—Blum reviews the basis for and the technic of various functional tests and their value for internal medicine and surgery. The sound kidney is able to adapt itself to varying demands within a wide range, and this is the basis of the dilution test which, he remarks, is the only means yet at our disposal for estimating the latent reserve force of the kidney. The patient drinks two or three glasses of mineral water, after which the ureters are catheterized and the onset, the amount and the duration of the polyuria thus induced determined; the change in the freezing-point is an index of the functional capacity of each kidney. He says in regard to the indigo-carmin test that this drug is eliminated by the kidneys alone, the sweat, saliva, bile and stools showing no trace of the stain; that it is non-toxic and harmless, and that it passes through the body without forming derivatives; it behaves like any other sodium salt and its elimination is analogous to the excretion of the urinary salts, so that this test is peculiarly important, as it approximates so closely physiologic conditons. (The technic was described in THE JOURNAL, Jan. 2, 1904, page 69.) He does not approve of the phloridzin test. It has been his experience that with old, chronic nephritis the difference between the kidneys does not surpass that under normal conditions. Parenchymatous disturbance interferes very slightly with elimination of water and salts.

88. **Natural Factors in the Healing of Tuberculosis.**—Tutsch has examined several hundred animals in respect to the size of the vital organs and has found that those species which are distinguished by greater resistance to tuberculosis are always those in which the heart, spleen and liver are *comparatively* much larger in proportion to the size of the animal than in other species. The richer the body in spleen and liver cells and the more oxyhemoglobin these cells produce, the more energetic the processes of oxidation in the body and the greater the resistance. The biochemical basis of natural immunity is thus the greater oxidation going on, and therapeutic and other measures to increase the oxidations are the natural, fundamental indications for treatment of tuberculosis.

Zeitschrift für Urologie, Berlin

April, IV, No. 4, pp. 241-320

91 *Traumatic Hydronephrosis and Pseudohydronephrosis. H. Wildbolz.
92 *Study of 334 Cases of Hypertrophy of the Prostate. A. Götzl.
93 *Action of "*Prostate Toxin*" in Prostatitis and Incipient Hypertrophy of the Prostate. J. Sellei.

91. **Traumatic Hydronephrosis.**—Wildbolz reports a case of true traumatic hydronephrosis, the ureter having evidently been crushed by the accident, with resulting circumscribed necrosis and probably minute perforation. A small hematoma and collection of urine at the point gradually induced changes in the region, leading to compression of the ureter and the kidney above had to be removed. From his industrial insurance the man was allowed 30 per cent. indemnity for the assumed resulting impairment of his earning capacity, but Wildbolz remarks that this is scarcely enough. The Swiss authorities exclude from industrial insurance persons who have had one kidney removed. Any injury, even comparatively slight, of the remaining kidney is liable to prove fatal. When the collection of blood and urine is large and the process develops entirely outside the kidney, the resulting pseudohydronephrosis may be cured by shelling out the encapsulated collection or making a permanent fistula to drain the cyst. In two cases reported this was successfully done. One patient was a woman who had been trampled by a cow; in the other case the patient had slipped on ice and fell sitting. In the latter case the kidney had to be removed with the cyst, as the ureter had evidently been torn out by the accident. There were no severe disturbances at first. Not until after nearly a month were there attacks of pain. They resembled some attacks which she had had a few months before that had been attributed to an inguinal hernia and had subsided after the herniotomy. Their recurrence later suggested that the kidney had probably been responsible for them in the first place, and thus had not been sound at the time of the accident.

92. **Hypertrophy of the Prostate.**—Götzl reviews his experience with 334 cases of hypertrophy of the prostate. He operated in only 11 per cent. of the cases *on the prostate* alone, but in over 17 per cent. an operation was undertaken on account of complications. In 24 cases the patients were under the age of 50. He found it possible by hygienic and dietetic measures to keep the first phase of the hypertrophy stationary for many years. Cystitis heals entirely if the amount of residual urine is not excessive and if the bladder wall is sound. Under other conditions the cystitis persists, refractory to all measures, even when the mechanical obstacle has been removed. Stagnation of the residual urine was responsible for development of stones in 71 per cent. of his cases. With patients complaining of severe gastrointestinal disturbances, frequent thirst and desire to urinate, a prostatic affection in an advanced stage should always be suspected. He adds that the suprapubic operation is winning constantly more adherents while palliative operations are losing ground. He lost one patient from postoperative pulmonary embolism; Riedl has called attention to the peculiar liability to this with thrombosis in the prostatic region.

93. **Organotherapy in Prostatitis and Incipient Hypertrophy of the Prostate.**—Sellei reports surprisingly favorable results from injection of the patient's own or an alien prostatic secretion in the effort to induce a kind of immunization against abnormal conditions in the prostate. The resulting development of autoprostatotoxin or isoprostatotoxin seems to have a curative influence on prostatitis and incipient hypertrophy of the prostate. He also found it possible to enhance this action by injection of specific cytotoxic serum from "prostatics" given preliminary treatment of this kind, their serum evidently acquiring increased proportions of cytolysins. His article is based on experiences with 18 cases.

Zentralblatt für Chirurgie, Leipsic

May 14, XXXVII, No. 20, pp. 705-736

94 *Technic for Chondrotomy. (Zur Technik der Freund'schen Emphysemoperation.) G. Axhausen.
95 *Technic for Temporary Laminectomy. (Eine einfache Art der temporären Laminektomie.) C. Hofmann.
96 Epidural Injections for Surgical Anesthesia. (Ueber die Verwertung der Sakralanästhesie für chirurgische Operationen.) A. Läwen.

94. **Technic of Chondrotomy.**—Axhausen obviates the regeneration of the perichondrium by stroking the inner surface lightly with the actual cautery.

95. **Temporary Laminectomy.**—Hofmann pushes back the muscles and makes the flap of the periosteum, bone, and interspinous ligament to obtain access to the dura. The whole operation took scarcely half an hour in a case in which he resected the spinal nerve roots to relieve tabetic gastric crises, and the patient was able to be up in a week.

Zentralblatt für Gynäkologie, Leipsic

May 14, XXXIV, No. 20, pp. 657-688

97 *Chloroform in Obstetrics. (Chloroformhalbschlaf oder Suggestivnarkose.) J. Eisenberg.
98 *Technic for Surgical Hemostasis in the Bladder. (Fall von Stillen einer lebensgefährlichen Blutung aus der Blase mittels Gazetamponade durch Kellyspekulum eingeführt.) C. D. Josephson.

97. **Chloroform in Obstetrics.**—Eisenberg describes the method of using a little chloroform in normal deliveries as practiced in America and England, stating that it is far superior to the scopolamin-morphin "twilight sleep," and urging its general adoption.

98. **Hemostasis in the Bladder.**—Josephson reports a case in which there was serious hemorrhage from the stump after removal of a polyp in the bladder of a woman of 41. He tamponed the spot with gauze introduced through a Kelly speculum, and was thus able to arrest the bleeding. The case warns against summarily snipping off a polyp in this way.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Charles L. Mix, M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Cloth. Price, $2 net. Pp. 615, with 191 illustrations. Chicago: The Year-Book Publishers.

TRANSACTIONS OF THE FIFTEENTH ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL, [illegible] AND OTOLOGICAL SOCIETY. Held in Atlantic City, [illegible] 09. (*Secretary, T. J. Harris, 117 E. Fortieth S*[illegible] *Cloth. Pp. 557, with illustrations.* Published [illegible]

MEDICAL EDUCATION IN THE UNITED STATES AND CANADA. A Report to the Carnegie Foundation for the Advancement of Teaching. By Abraham Flexner. With an Introduction by Henry S. Pritchett, *President of the* Foundation. Bulletin No. 4. Paper. Pp. 346. 576 Fifth Ave., New York, 1910.

EDUCATION IN SEXUAL PHYSIOLOGY AND HYGIENE. A Physician's Message. By Philip Zenner, Professor of Neurology in the Medical Department of the University of Cincinnati. Cloth. Price, $1 net. Pp. 126. Cincinnati: The Robert Clarke Company, 1910.

GRUNDRISS UND AT[illegible] CHIRURGIE. By Dr. Georg Sultan. Lehmann's [illegible] atlanten. Volume XXXVI. Cloth. First Edition. [illegible] Pp. 459, with 258 illustrations. Munich: J. F. Lehmann's Verlag, 1907.

DIE AMBULANTE BEHANDLUNG DER [illegible] (Dr. Jessner's Dermatologische Vorträ[illegible] Fourth Edition. Paper. Price, 0.90 mark. Pp. [illegible] [illegible]urg: Curt Kabitzsch (A. Stuber's Verlag), 1910.

MEDICAL VADEMECUM IN GERMAN AND ENGLISH. By B. Lewis. With Preface by Dr. A. Politzer. First Edition. Cloth. Price, $5 net. Pp. 559. Philadelphia: P. Blakiston's Son & Co. [1910].

GENERAL SURGERY. Edited by John B. Murphy, M.D., Professor of Surgery in the Northwestern University, *Chicago.* Volume II. Series 1910.

THE JOHNS HOPKINS HOSPITAL REPORTS. Volume XV. Paper. Pp. 542, with illustrations. Baltimore, 1910.

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SURGICAL CONSIDERATIONS IN THE TREATMENT OF CHRONIC SUPPURATIVE NEPHRITIS*

D. S. FAIRCHILD, M.D.
CLINTON, IOWA

During the past twenty years a good many cases of affections of the kidneys attended with pus in the urine almost, if not quite, as a constant condition, have come under my observation. The symptoms have not usually been severe, but persistent, and have incapacitated the patient for active employment. Some of these cases have been attributed to trauma and were studied primarily on account of claims against corporations. Others were supposed to be cases of renal calculi; but exploration of the kidney demonstrated the absence of stone but the presence of a chronic suppurative, interstitial nephritis which was relieved by a decapsulation or by incision and drainage. Patients have come under my care following some infectious disease, particularly pneumonia. For instance, a few years ago a patient was referred to me, by a physician of considerable skill and ability as a diagnostician, for the removal of a tuberculous right kidney. The patient was under my care in the hospital for two weeks. It was before the days of satisfactory cystoscopic examinations. The segregator appeared to show that both kidneys were involved in a suppurative process, the left more than the right. Specimens from both kidneys contained pus in which were germs identified by thoroughly competent bacteriologists as being *Bacillus tuberculosis* and ordinary pus-forming bacteria—staphylococcus, the number of tubercle bacteria being rather small and probably accidental. The kidneys were explored; neither showed any evidence of being tuberculous. One kidney was incised and drained, the other decapsulated. The pus gradually disappeared and in two months the urine was clear and normal. The patient fully recovered her health. This patient had suffered an attack of pneumonia six months before coming under my care, had recovered so far as her lungs were concerned but her health remained impaired because of the infection of her kidneys. The marked improvement immediately following the operation and the rapid recovery left no doubt in my mind as to the beneficial effects of the surgical procedure.

The infection no doubt, in many cases, travels up from the lower urinary tract and is often probably primarily of gonorrheal origin and may assume first a pyelitis, which in a considerable proportion of cases subsides with or without medical treatment, but in a certain per cent., the infection extends beyond the pelvis and becomes a pyelonephritis which continues an indefinite time.

The nature of the disease especially referred to in this paper is a mild hematogenous infection, which does not result in destructive changes or lead to abscess formation, unless through some accession of germ activity or some serious interference with kidney drainage from obstruction of the ureter.

The effect on the kidney itself is generally not serious at least for a considerable time. The organ is hyperemic and swollen, and later a proliferation of connective tissue may be expected. Some kidneys show an uneven cortical surface as from the contraction of connective tissue, as in scar formation.

The eliminating power of the kidney is not seriously impaired except on occasions, as from exposure or when an increased burden is thrown on them. Under these circumstances a rise of temperature may be observed attended by some of the symptoms generally attributed to uremic toxemia. The urine is decreased in quantity and the amount of pus is considerably increased. These symptoms, often of a serious character, subside after ten days or two weeks and the kidneys if both are diseased, resume their former condition. The pus still persists in the urine. Provided the ureter does not become occluded, the constant drainage saves the kidney from abscess formation. In a certain percentage of cases, the infection reaches the organ through the circulation, as in post-typhoid and post-pneumonic conditions. The kidney drains through the ureter for a considerable time—a year or more perhaps. The patient's health is impaired but there are no very urgent symptoms. If, however, some process develops in the ureter whereby it becomes blocked, more or less completely, single or multiple abscesses may be expected to result. Either in consequence of this or of the kind and severity of the infection, a nephrectomy becomes necessary.

It is not uncommon for the kidney to become infected scondarily from some more remote focus. When this occurs, the embolic nature of the process is likely to determine one or more abscess formations. In such cases it is not uncommon for the abscess to drain into the pelvis of the kidney and thus be discharged intermittently with urine; although pus may be found in the urine as an almost constant condition.

If the ureter is permeable, the kidney may remain without any material change for some time and may even recover without any operative procedure. In the event of a blocking of the ureter the kidney may become practically destroyed by the advancement of the suppurative process.

I have met a considerable number of mild infections of the kidney secondary to infected wounds, as compound fractures and more or less extensive skin infections associated with wounds. I have likewise met embolic processes following the same conditions involving abscess formations which required nephrotomy and sometimes nephrectomy.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

It is not the purpose of this paper to discuss the severe infections but the mild, in many cases of which the patients recover under proper dietary regulations and rest.

I trust it will be taken for granted that I am not confusing pyelitis with a suppurative process which has invaded the connective tissue structures of the kidneys extending along the tubular system. It is admitted, however, that an ascending infection may have at first involved the pelvis, and when limited to this part of the kidney, subside without any radical treatment being employed.

Patients afflicted with these milder infections of the kidneys do not, as a rule, suffer from severe symptoms unless subject to exposure or to conditions very materially increasing the work thrown on these organs, but there is an impairment of health which ranges from a moderate indisposition to confinement to the house, as illustrated briefly by a few cases.

Case 1.—A locomotive engineer who had pus constantly in his urine and had been unable to perform any part of his duties, attempted to run his engine a hundred miles. Before completing his run, he was taken with vomiting and severe pain in the abdomen. The same night he was seized with a chill followed by a temperature of 104 F. and soon afterwards, by some uremic symptoms. The quantity of the urine was greatly reduced and loaded with pus. Elimination by the skin and bowels gradually brought about an improvement, and in two or three weeks he had regained his former condition except that the amount of pus in the urine was materially increased for two months or more. He would not submit to operative treatment and at least for five years more the condition remained unchanged.

Case 2.—A railway conductor who for a year had declined in health and was able to work only at intervals, came under my care. Pus was found in urine. The right kidney was tender to pressure and somewhat enlarged. After three months of general treatment without improvement, the patient submitted to an operation. The organ was exposed and found suppurating but no distinct abscess existed. The kidney was freely incised and allowed to drain. Pus soon disappeared from the bladder urine but was found for some time on the dressings. The wound finally closed with complete recovery.

Case 3.—Another patient had an inflammation involving the right kidney which had persisted for several months. He began to suffer from chills, which recurred every two or three weeks followed by a temperature of 102 to 104. Pus was constantly present in the urine but attending each of these attacks the quantity was very considerably increased. In five or six days the temperature would reach the normal, and the pus in the urine would very materially decrease in quantity. Finally, following one of these attacks, the secretion of urine nearly ceased and uremic delirium supervened. The kidney was exposed; abundant evidence of long-standing inflammation appeared but no pus accumulation was found. Notwithstanding this, the kidney was incised from one pole to the other. It was allowed to drain without the use of any tube or tissue in the kidney wound. All the conditions promptly improved. Pus rapidly disappeared from the bladder urine but continued on the dressings for some time.

The surgical treatment I have employed in the form of kidney lesion referred to in this paper is decapsulation or incision. It is true the operation of decapsulating the kidney has fallen into considerable disfavor, but I cannot avoid the belief that the procedure has considerable merit after all, not perhaps in some of the forms of disease for which it has been advocated from time to time; but in many of the kidneys now under consideration, it is certainly curative in its effects. It very obviously would not be a rational procedure for the purpose of drainage of infected kidneys.

I have in mind certain patients in poor health in whose urine pus had been present for a considerable time, one kidney or the other or both, being affected. Ordinary treatment having no good effect, the organ was exposed and found hyperemic and swollen; incision not seeming indicated, decapsulation was resorted to, not quite so extensively perhaps as has been recommended, but sufficiently to release tension and allow, theoretically at least, an improvement in nutrition and thereby an increased resistance to morbid processes. However this may be, I am certain of the curative effect of the undertaking. With the patients whose symptoms and whose kidneys show a more marked influence of the infection, a more radical course is necessary; the kidney should be incised and allowed to drain. No drainage material whatever has been introduced into the kidney incision unless an abscess exists. The wound in the loin has been partly closed and two or three cigarette drains extending down to the kidney.

A consideration of my own cases and many in which treatment by decapsulation was employed some years ago with much apparent success, which also unfortunately led to the extension of the operation to impossible conditions involving degenerative changes, leads me to believe that if the procedure had been confined to cases of infections of the organ, this treatment would not have fallen into discredit. It cannot be doubted that many of the large congested and sometimes mildly infected kidneys that were anchored by means of a detached flap or even by a more liberal use of the capsule, were benefitted more by releasing the tension than by the fixation itself, whereby the circulation and nutrition were improved. It may be noted in this connection that the fixation of a normal kidney which is subject to even rather wide excursions carries with it no advantage to the patient unless the mobility causes distinct pain.

I have already attempted to say that a more serious and widely extended infection not referring to abscess formation—needs incision, for only in this way can drainage be affected, but in milder types, decapsulation is generally sufficient, placing, as I believe, the kidney in a vastly better condition for recovery.

ABSTRACT OF DISCUSSION

Dr. A. H. Ferguson, Chicago: I cannot see the use of decapsulation of the kidney for chronic inflammation of that organ. There are other and better methods of treating such a kidney. In cases of extensive abscess, one can do a nephrotomy and drain. In cases of a milder nature nephrotomy is not indicated. Washing out the pelvis of the kidney, drainage of the pelvis without opening the kidney, treatment by vaccination, are methods we should resort to before undertaking capsulation. If all these fail, and the kidney is much destroyed, we must do a nephrectomy. I have seen two or three cases in which there was pus in circumscribed areas here and there in the kidney, but simple excision of the abscesses effected a cure, the kidney itself remaining untouched.

Dr. D. S. Fairchild, Clinton, Ia.: I did not intend to convey the idea that I treated suppurating kidney by decapsulation. I referred to cases of mild infection in which decapsulation might bring about a beneficial result by relieving tension and allowing an improved condition of nutrition. In all cases of suppuration of the kidney in which pus is distributed throughout the organ, the kidney ought to be excised. I think that Dr. Ferguson was much given at one time to decapsulation for various conditions, but in my paper I stated distinctly that in cases of mild infection in which we do not want to do a very radical operation decapsulation, if the capsule is tense, is indicated. In cases of severe infection excision is the only thing. Of course we do not want to remove the kidney if a good result may be obtained in any other way.

THE PROPER TREATMENT OF INTRAPERITONEAL ABSCESS IN THE LOWER ABDOMEN

WITH SPECIAL REFERENCE TO RECTAL DRAINAGE IN PELVIC ABSCESS*

ARCHIBALD MACLAREN, M.D.
ST. PAUL, MINN.

The successful treatment of any intraperitoneal accumulation of pus depends on proper drainage. In women it is a well-established fact that drainage through the vagina is at times better than draining through the anterior abdominal wall. Mr. Pollard has said that occasionally in his experience drainage through the rectum has been better even than vaginal drainage because it reaches a lower point in the peritoneal cavity. In dealing with an accumulation of pus in the peritoneum the proper method to pursue is to treat the rectovesical or recto-uterine pouch as though it were always infected, for even though it does not contain pus in the early stages of localized peritonitis, it is very likely to become infected later, as we all have seen in a great many instances. The extension of pus to near-by peritoneum, and especially to the bottom of the pouch, is not a dangerous accident if proper drainage is provided. Van Buren Knott has very pertinently put it: "Why should we be afraid of general peritonitis? To-day we know how to deal with and cure this disease"; and if we see the cases early enough and establish proper drainage at once, our general peritonitis patients will usually recover." Proper drainage when combined with the Fowler position, is the most important point in effecting a cure. Dr. Knott's experience in over 160 consecutive cases of appendiceal abscess, in every one of which he has broken up the abscess walls and removed the appendix, with but two deaths, is very convincing. His plan, which I believe to be founded on sound surgical principles, is always to drain the bottom of the rectovesical or recto-uterine pouch with a large-sized split rubber tube, carrying a wick of gauze through the anterior abdominal wall just above the symphysis. I believe that if this plan is pursued the necessity for vaginal or rectal drainage will in the future be very much reduced. The older methods of drainage of abscess cavities and removing the appendix only when it presented itself and could be reached easily have resulted in many later accumulations in the pouch.

A good plan of procedure, and one which I have followed a great many times, is first to open an accumulation of pus in the pouch either through the vagina or through the rectum, to put in a winged rubber tube and then immediately proceed to open the abdomen above and to deal with the pathologic condition according to general surgical rules. By this method the amount of pus is considerably reduced and other, often unsuspected abscesses are found and evacuated.

The purpose of this paper is to show that rectal drainage is no more dangerous to the patient than vaginal drainage, and that a very useful addition to our operative measures and occasionally a life-saver. Two years ago I presented a short paper[1] on rectal drainage to the American Surgical Association and recited the histories of five successful cases in which pelvic abscess had been opened and drained into the rectum; all of these were cases of men or boys and the drainage was used in the same manner that we have been in the habit of using vaginal drainage in women. I wish now to offer my further experience, and to speak of the few comments which have been made on this subject in the English and American medical press.

The five cases already reported were all due to perforative appendicitis, in which the abscess cavity had originally been opened through the anterior abdominal wall. These cases had progressed favorably for several days and then gradually began to do badly, showing return of fever and pelvic pain. A rectal examination several days after the primary operation demonstrated a collection of pus in the rectovesical pouch with bulging of fluid against the anterior rectal wall. Opening these abscesses through the rectum and drainage with a winged rubber tube yielded most satisfactory results. At that time I also advised overdistention of the sphincter so that there would be no back pressure from the rectum into the abscess cavity. Whether this last procedure is of any value or not I cannot say; but it has the negative virtue of doing no harm.

Belfield,[2] says, that the statement which I had made, namely, that all pelvic abscesses in men were due to perforative appendicitis, is certainly erroneous; in which he is entirely correct. Suppurations from the prostate or seminal vesicle are true pelvic abscesses and they are most apt to point in the perineum, and consequently should be opened at that point. What I should have said was that practically all intraperitoneal abscesses were due to perforation of the appendix and that abscesses in the rectovesical pouch should be opened into the rectum. The objection has been made that because the normal intra-abdominal pressure is approximately 16 pounds to the square inch, postural drainage is not needed; that ordinary drainage is all that was necessary. This is no doubt true in the majority of cases; but every surgeon knows that it is not always true; that dependent drainage with intraperitoneal pressure is much better than ordinary uphill drainage under the same condition. When the intestinal coils and omentum become adherent to each other, the intra-abdominal pressure becomes decreased, and under these circumstances a suprapubic drain only allows the escape of the overflow and the pouch is never emptied.

Mr. Archibald Cuff in the London *Lancet*, a few months ago, in speaking of the treatment of appendiceal abscess says, "One advocate of rectal drainage whose zeal would seem to be based on a slender and unsatisfactory experience, admits on one occasion opening the bladder by accident." This sounds as though the accidental opening of the bladder in this case was a very serious matter, while, as my first report states, the patient had not the slightest trouble, not even discomfort as a result, and recovered perfectly in spite of this accident, which ought not to have occurred. In this case to make sure that I had really opened the bladder I introduced my finger into the bladder so that I could feel the prostatic opening of the urethra. I made no attempt to close the opening, but proceeded to open the abscess behind the bladder. That same night the man passed bloody urine normally and did not even develop a cystitis. This accident happened before I had perfected a line of procedure to be followed in this operation, and when the rectovesical pouch was opened practically by the sense of feeling and without the operator's being able to see where it was best to make the opening.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

[1] Surg. Gynec. and Obst., June, 1908, p. 671.

[2] Belfield, W. T.: Prog. Med., December, 1908.

In a different vein is the article by Mr. Bilton Pollard,[3] surgeon to the University College Hospital. Mr. Pollard says that he was just about ready to publish an article on rectal drainage when my paper[1] appeared. He reports one case of diffuse septic peritonitis with a large intraperitoneal pelvic abscess of three weeks' duration, in which rectal drainage was the only operative procedure, with perfect recovery. Of accumulations of pus in the pelvis following an ordinary laparotomy for appendicitis, he says that he has opened several through the rectum and always with success. When I wrote my paper two years ago I had not operated in any case of pelvic abscess just like this one, but I mentioned this kind as particularly suitable, and expressed my intention of operating in the first one which presented itself.

As already mentioned, the five cases reported two years ago were cases of pelvic abscess following intraperitoneal operations for appendicitis, in which several days after the primary operation accumulations of pus in the rectovesical pouch were opened and drained by rectal section, and all of these patients recovered.

REPORTS OF CASES

Sixth Case.—One week after Dr. Pollard's report was published in England, I operated, in a precisely similar case, on a boy aged 14, sent from Canby by Dr. J. S. Kilbride. The patient was profoundly septic, the perforation having taken place ten days before. Every one was agreed that the boy was growing rapidly worse. The abscess apparently was not adherent to the anterior abdominal wall but bulged markedly in the anterior wall of the rectum. At least a pint of thick, very offensive pus was evacuated by rectal puncture and a rubber tube was put in; the next day the patient's temperature and pulse were practically normal. On the second day he was "cured." On the sixth day the tube was removed, and on the twelfth day the patient went home. He has been perfectly well ever since.

Seventh Case.—This was one of the typical non-operative cases of Ochsner in which the abscess was probably going to rupture back into the free peritoneal cavity before the eighth day. In this kind of case on several occasions I have seen the patient suddenly die on the fifth or sixth day. The patient in this case, a little girl, aged 7, was desperately sick; perforation had occurred five days before; temperature was 104; pulse 130 to 140, and of a very bad character; there was general abdominal distention; and excessive bulging through the rectum. One-half pint of pus was evacuated through the rectum. The patient did well until the fifth day after the operation. On the seventh day anterior abdominal section was made, and a large abscess about the appendix, containing gas, was opened. The patient died on the tenth day. This child should have had abdominal section either the same day as the rectal section or not later than forty-eight hours after. I believe that in this case the rectal section prolonged life, even if it did not save it.

Eighth Case.—The patient, a boy aged 7, who had been sick for ten days, was seen with Dr. Buckley of St. Paul. This was much the same kind of case as the one just preceding. Temperature was 99; pulse 120. There was decided bulging of the anterior rectal wall, which was first opened and a half of a pint of thin watery offensive pus let out. The patient was much better for two or three days; on the fifth day he was worse again. Temperature was then 101; pulse 120. There was a mass in each loin; these were opened and drained in front, and the appendix, which was a long one and ran over the brim of the pelvis, was removed. The patient then promptly recovered.

Ninth Case.—The patient, a boy, was sent by Dr. Campbell of South St. Paul. The case was one of ordinary appendiceal abscess, seen first on the seventh day. The abscess was opened above behind a gauze tampon, and one ounce of thick pus was let out. I could not distinguish the appendix or find an enterolith. After closing the wound and putting in a drain, and just before I sent the patient from the operating room, I made a rectal examination to find a separate pelvic abscess containing fully three ounces. This separate abscess, not discovered in the earlier stages of the operation, was opened into the rectum. The boy made a perfect recovery and has been well ever since.

Tenth Case.—The patient, a boy, aged 6, was sent by Dr. Boothby, Hammond, Wis.; he had suffered from perforation of the appendix eight days before. Pathologic condition was one of acute, suppurative, perforative, gangrenous appendicitis. On July 19, 1909, the appendix was removed after the abscess was opened; a drain was put through a stab just outside the wound; on the seventh day the patient was found not doing well; temperature was 101. That night the patient was uncomfortable, crying most of the time from distress in the rectum. Rectal examination showed fluid in the rectovesical pouch. On the eighth day a rectal section was made, and half a pint of clear serous pus, followed by two drams of thick pus, was evacuated, a small rubber drainage-tube was inserted in the opening in the rectum. The following day the boy felt much better; on the third day after the second operation the tube came out and was not replaced. The patient recovered, and has been perfectly well ever since.

Eleventh Case.—The patient was a young man, aged 25, suffering from a first attack which had begun five days before; he was able to work until two days previous to the operation, when he began to suffer very intense pain and was confined to his bed. Temperature was 100; pulse 90. There was general rigidity of all abdominal muscles and intense pain. Pathologic condition was one of general septic peritonitis, due to gangrenous perforative appendicitis, pelvic abscess and an accumulation of fluid in right loin. Rectal section was first made; one-half pint of turbid, very offensive serum was evacuated and a tube was put in; when the abscess was almost emptied the fluid became true pus. This was immediately followed by laparotomy and removal of appendix and a suprapubic drain was put into a stab wound over the symphysis; a gauze drain was put through the wound into the right loin. The man was put in the Fowler position. On the third day the suprapubic drain was removed; on the thirteenth day the rectal tube was removed. This patient recovered and has been well ever since.

Twelfth Case.—The patient, Mr. C. of Detroit, Minn., aged 30, was sent by Dr. Charles Greene of St. Paul. There was a mass in the right side and fluctuation in the rectum. The pathologic condition was one of acute suppurative, perforative appendicitis with abscess pointing toward the rectum. Operation was performed on the sixth day of the first attack. Rectal section was first made, and four ounces of offensive pus evacuated; a drain was put through the anus into the abscess cavity, and this was immediately followed by laparotomy. The adhesions were so dense that I could not reach the abscess cavity, even after deep dissection; the drain had to be put through stab outside of wound. This patient returned three months later and had his appendix removed.

Thirteenth Case.—C. A., patient of Dr. Rider of Shakopee, was operated on by my partner, Dr. Ritchie, in his second attack, seven days after perforation. The appendix could not be found; the abscess was opened and drained. On the ninth day after operation the patient began to have pelvic distress and a sense of pressure in rectum. Rectal section was made and a pint of very offensive pus was evacuated through the rectum and the abscess drained. Three months later the appendix was removed. The patient recovered and is now perfectly well.

Fourteenth Case.—F. A., aged 6, patient of Dr. Rudolph of Ellsworth, Wis., suffered with several mild attacks of colic lasting about half a day each. The present attack began with very severe pain and vomiting seven days before I saw the case. The pathologic conditions were acute, suppurative appendicitis; localized pelvic abscess, fluctuating through the rectum; localized collection of pus just outside of McBurney's point; eight ounces of thick offensive pus; no enteroliths. The operation consisted: first, of rectal section, which let out four ounces of thick offensive pus; a drainage-tube was then put in and this was immediately followed by laparotomy. The abscess to the outer side of the cecum was opened, and drained with two cigarette drains through stab just outside of the wound.

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[3] Pollard, B.: Brit. Med. Jour., July 25, 1908.

One month later the patient came back with another attack of appendicitis; this time the appendix was removed; the patient promptly recovered and has been perfectly well ever since.

Fifteenth Case.—J. S., aged 20, patient of Dr. Breed, Rock Elm, Wis., had suffered previously from several attacks. The present attack commenced eight days before the patient was seen; he had suffered with constant pain in the rectum from the very first of this attack up to the present time. The pathologic condition was one of acute suppurative, perforative appendicitis. The abscess was well walled off; there was a large accumulation, fully half a pint of thin serous pus in the rectovesical pouch; and another accumulation of thick pus in the right loin. Rectal section was first made. This was followed by a cross-muscle incision in McBurney's point. The abscess in the loin was opened, which showed no apparent connection with the pelvic abscess cavity. The rectal drainage-tube was removed on the fourth day. The patient promptly recovered, and has had no further trouble.

METHOD OF PROCEDURE

The position used is the exaggerated position (Pryor), the one usually used in making examinations of the female bladder with the cystoscope. The most important part of this position is the use of straps over the shoulder, fastened to the uprights holding the feet, to prevent the shoulders from slipping away when the head of the table is dropped. I have found that a weighted vaginal speculum will expose the anterior wall of the rectum fully as well as it exposes the vault of the vagina in the similar operation for vaginal section.

One long-bladed retractor for the anterior wall is necessary to hold the bladder out of the way. The bladder having been catheterized to prevent accident (a thing I omitted to do in the case related), the rectum should be irrigated until fecal matter is removed, and then sponged out with alcohol. After the rectum has been well cleaned and the bulging anterior wall well located, the abscess should be opened with long, sharp-pointed scissors, used as a dilator. After the rectovesical or recto-uterine pouch is opened and the fluid let out the dilator should be kept in place until a quarter-inch, winged rubber tube can be passed well up into the cavity; then the sphincter should be dilated.

There are comparatively few vessels in the posterior vaginal wall, but as has been shown[4] there is some danger of hemorrhage following rectal section, more, I am sure than in vaginal section, so that I am inclined to believe that in these cases the lesser procedure of rectal puncture would be the operation of choice.

Vaginal puncture I do not like; it is too blind and does not give sufficient room for further exploration, but in these cases, all that is necessary is an opening through which to pass a drainage-tube.

It has been a great pleasure to see the relief and comfort which these patients have received from rectal drainage, and to note the rapid drop of temperature and pulse which followed this very insignificant operation.

412 Holly Avenue.

ABSTRACT OF DISCUSSION

Dr. J. M. Baldy, Philadelphia: It is exceedingly unfortunate that we should have to discuss the subjects of this paper, but as some cases—fortunately, an exceedingly limited number—makes its discussion necessary, it is fitting that we give it careful consideration. The existence of such cases, in the present state of modern surgery, is a disgrace; it implies that there is gross neglect on the part of the physician who referred the case to the surgeon primarily, and the grossest possible neglect on the part of the surgeon to whom such cases are sent, for not dealing with them properly.

In the women it is a very simple matter. No one would think of taking such steps in a woman to secure drainage. The vagina would naturally suggest itself, for more reasons than one, as the place through which to make an opening into the abscess. If the case occurred in a man, it would imply that the surgeon would first go into the abdomen, clear up the nucleus of infection, and then deal with the opening secondarily. All we would have to do in that case with the condition in the pelvis would be simply to drain for a day or two, and that would be the end of it. In men, of course, if such cases do occur they must be rare in the hands of a good surgeon. Then it may be justifiable to open the rectum. But one would question the skill of the surgeon who had done the primary operation. There ought to be such a small proportion of these cases that it should really be unnecessary for us to consider them; but if they do occur from neglect of clinicians or of immature surgeons, the thing to do is to open the rectum, secure free drainage and permanent drainage until the condition is cleared up, then close the opening, and that is all there is to be done.

Dr. Maurice H. Richardson, Boston: Long ago, in the early days of appendicitis, when everybody waited for the abscess to form, nearly every case of appendicitis was fatal. The cases came to us—cases of abscesses of this kind—and many times we observed an abscess opening into the rectum, which would perhaps break under the pressure of the finger. I also observed in many cases that if we had twenty-four hours to watch the case before the operation, the abscess would break into the intestinal canal, and the patients would recover. This is Nature's way of doing things, and it seemed rational to operate through the rectum. Years after the appendix was removed through the abdomen. It seems to me, of course, that the only cases of this kind that we see now come to us through ignorance, perhaps on the part of the patient, or—but very rarely—on the part of the physician. But some methods of treatment—for example, the treatment of walling off a local peritonitis so that it will not become general, if not done properly, or if done by one who does not understand the physical signs of abscess, will cause just that kind of a case. I have seen this happen in a few cases of pointing into the rectum in appendicitis.

I see cases of appendicitis frequently in which the pus connects with the tubes in the female, and the result is an undesirable one. As Dr. MacLaren has said, these are the cases in which the abscess will open through the rectum, and the original focus of infection can be sought for with great safety afterward. This is a distinctly advantageous method of treating these few deplorable cases which through many grave dangers have come to rectal opening.

Dr. A. MacLaren, St. Paul, Minn.: These cases occur in the hands of every man who does a great deal of this work, and while they are undesirable cases, there must be some way for taking care of them, and it is for this purpose and none other that I presented this paper.

Daily House-to-House Visitation of Non-immunes in Campaign Against Yellow Fever.—A Veracruz daily paper has recently published in full the address on this subject read at the meeting last October at Richmond of the American Public Health Association by Dr. C. M. Garcia, in charge of the work at Veracruz. In addition to the usual prophylactic measures, screening, isolation of patients, etc., the Mexican National Board of Health sends inspectors to every person known to be not an immune, whether they are residing in or merely passing through the old yellow fever zone. This is done daily regardless of whether or not the disease is epidemic. By thus keeping the non-immunes under constant medical supervision, the first onset of possible disease is recognized at once, and the authorities are able to apply isolation and disinfection from the start. The Journal described in detail, March 23, 1907, page 1048, the successful campaign against yellow fever in Mexico, commenting especially on its eradication in Veracruz which for centuries was one of the principal hotbeds of the disease.

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[4] Case 4, Surg. Gynec. and Obst., June, 1908, p. 671.

HOW SHALL THE STOMATOLOGIST BE EDUCATED?

EUGENE S. TALBOT, M.D., D.D.S.
CHICAGO

It is a popular idea that "the dentist on graduation is better equipped for practice than the physician." This is misleading, not only to the dental graduate, but also to the physician and the laity. The statement was tenable seventy years ago when the first dental college was established and dental mechanics only were practiced, but modern research has shown us that many incipient diseases first show themselves in the mouth by their effect on the mucous membrane, alveolar process, jaws and teeth. These conditions frequently become serious.

In conversation with some of the members of the Council on Medical Education, in regard to the medical education of the dentist, they were surprised to know that further education was necessary. They were under the impression, that the graduate of dentistry had received a full and complete education; that is, all that was necessary to fit him for his special branch of medicine.

There are a few dentists who, after they have been in practice a short time, realize that they know little of the treatment of diseases of the mouth, so necessary at the present time. Some are willing and able to take a medical course to prepare themselves thoroughly to become stomatologists. Others would like to do so but circumstances will not permit it.

NO CREDIT FROM THE MEDICAL SCHOOLS

The medical school does not give credit for any part of the course of the dental graduate (and rightfully), because he has scarcely a smattering of the fundamentals of medicine. It is necessary for the dentist to take a medical course of four years, over and above the three years spent in the dental school. In the best dental schools, the Dean will tell you the dental students sit in the same room, hear the same lectures, and stand the same examinations as the medical students. All know the dental student is not required to have the close marking required of the medical. What a disgrace for the dental graduate after a three years' course in one department of a university to have so vague a knowledge of the fundamentals of medicine that he cannot get one year's credit in another department in the same university although he has been sitting on the same seat, in the same room and hearing the same teacher on the same subject. Teachers on the fundamentals of medicine have informed me many times that dental students did not need the same serious consideration of the subject as the medical students required, and therefore their examination was not so severe; hence, the dental student is allowed to slip through on a lower average than the medical student.

The dental student on graduation knows little or nothing of the fundamentals of medicine, no matter how well he may have been taught. The reason is that the dental student on matriculation, is immediately put to work on the mechanics of his profession. The entire environment and atmosphere of the school is mechanics. The contrast between the mechanic and the biologic is so great that the student immediately asks the question. "What is the advantage of all this study of anatomy, physiology, pathology, chemistry and therapeutics when the care of the teeth is all I require?" Thus the atmosphere of the school itself makes the student a mechanic rather than a broadly educated man.

THE DEGREE OF D.D.S.

Some thinkers are trying, or rather expecting to raise the standard of the D.D.S. to equal the M.D. degree, and thus to an honorable position. To my mind, it can never be accomplished. The D.D.S. will always be considered an inferior degree. To make the degree equal to the medical the student must study the same number of years. Then, why not confer the medical degree? The student will not tolerate an inferior degree. Present methods of dental teaching will not improve the student's mentality though a six-year course be required for graduation.

STOMATOLOGY AS A SPECIALTY

There can be no question that men proficient in the mechanics of dentistry (to repair and restore lost parts), and men to treat diseases of the mouth (which includes the jaws and alveolar precesses), are essential. Shall the specialty be divided and the dentist confine himself solely to the mechanics of the teeth and the stomatologist to the diseases of the mouth, or shall the student be so educated as to combine both?

If the specialty is to be divided, dental schools are wasting time and money in even attempting to teach the fundamentals of medicine. There are, in the United States, fifty-four well-equipped schools to teach the mechanics of dentistry, and they are all that can be desired in this direction. The stomatologist, on the other hand, is losing time in not acquiring a better foundation for the practice of his specialty. He should matriculate in the medical school and obtain a thorough medical education, since modern research has demonstrated that not a single disease of the mouth, jaws and teeth but has a systematic relationship. Personally, I am of the opinion that the two departments, pertaining to all operations in the mouth, cannot readily be separated. The question is then, "How Shall the Future Stomatologist be Educated?"

INTERNATIONAL ASSOCIATION OF STOMATOLOGY

In August, 1907, there was organized in Paris, France, The International Association of Stomatology. The delegates to that meeting all held medical degrees from universities and colleges in the various countries from which they came. Nearly every country was represented. The object of this organization is to urge a medical education alike in all countries for those practicing diseases of the oral cavity.

At this meeting, two questions were settled: First, That a complete medical education must be required of every dentist. Second, the word "stomatology" was defined as meaning the science that treats of diseases pertaining to the mouth; the "stomatologist" is one who treats diseases of the mouth.

THE QUESTIONS TO BE SETTLED

At the second meeting of the A.S.I., held at Budapest, August 1909, the following paper by me, "How Shall the Stomatologist be Educated?" was discussed. The thoughts therein expressed were incorporated in a report prepared for universal discussion. These questions are to be sent to members in the various countries for careful study, and are here presented for your consideration. They are as follows:

a. When is it best to begin the special studies; during the time of the general medical studies or immediately after these?

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

b. Advantages and disadvantages of each.

1. Special studies begun during the special medical course.

2. Special studies begun immediately after the general medical course.

c. Length of time required for special studies of each system.

d. Details of the special studies of each system.

It is necessary that these questions be seriously considered by the members of this section, since they must serve as the foundation for future dental education in many, if not all, the countries, and also for the lengthy discussion before the A.S.I. at its next meeting in Paris, 1911. It will be necessary also to publish this discussion in full in the Bulletin for 1910, Volume III, from the JOURNAL of the American Medical Association, in order that it may appear some months previous to that meeting, so that an intelligent understanding of the subject may be presented from each country.

The fathers of American medicine, the late Drs. N. S. Davis, Gross, Sayre, Flint, Toner, Pancost and many others, believed that diseases of the mouth, including oral hygiene, the most important study of the human body. Stomatologists are of the same opinion. This being the case, should not this specialty require the same method and the same length of study as the lesser specialties of medicine? The dental profession have not yet awakened to the seriousness, importance and scope of their calling.

The main point and first to be considered is, how can the stomatologist be educated and not lose time, but have all his studies count for future work. At the present time, there are two methods of studying medicine in the United States, hence the education of the stomatologist must be based on these methods, subject to more modern improvements. Both medical and dental students, at the present time, must possess a high school diploma or its equivalent; therefore, they start their chosen profession on an equal footing. In some medical schools, the high school graduate is allowed to matriculate, pursue a four years' course and graduate with an M.D. degree. The other method has been worked out by Dr. John Milton Dodson[1] as follows:

> "With the last decade there has developed a plan in several American universities under which a student takes, during the junior and senior years, those sciences which constitute the first two years of the medical curriculum. Credit for the successful completion of the work in these branches is permitted to count both toward a baccalaureate degree in the collegiate department and toward the degree of M.D. in the medical school. The student is thus able to secure the baccalaureate degree and the degree of M.D. in from six to seven years after his completion of the high school course and his matriculation in the university. The plan has extended rapidly, it being now in operation in over thirty American universities. It is believed by many educators to be the best solution yet offered of the problem of how to provide a good many students with a fairly adequate premedical training, and to induct them into the study, and later, the practice of medicine at a reasonably early age."

This method of teaching will, no doubt, become universal in this country. By either method the dental student must pursue the fundamentals of medicine in physics, zoology, chemistry, anatomy, physiology, embryology, bacteriology, pharmacology and the principles of pathology.

The first two years of medical studies should be conducted in the university proper since they are better equipped than the average medical college for this work. The stomatologist should continue the course to this point with the medical class and obtain credit. He should not come in contact with patients during the first two or three years of study. Laboratory work and the use of the microscope has given him considerable experience in finger manipulation. The finger manipulation cannot be more delicate than that required in the laboratory and dissecting room of a university or medical school. To offset this objection, if it can be considered one, it is essential that the student should be required to obtain as much of his professional education as possible before coming in contact with the commercial side of his specialty, which is so demoralizing to his future welfare by the present methods of teaching.

One strong argument put forth against a medical education for the dentist is the early requirement of finger skill which is supposed to be lost later in life, the student being too old after a medical education to acquire the skill necessary to perform operations in the mouth.

To ascertain the ages of entrance into the best schools in the country, I wrote to eight, requesting them to send me a report of the ages of matriculation for the past five years. Deans Koch, of the Northwestern University Dental School; Smith, of Harvard University Dental School; Kirk, of the University of Pennsylvania Dental School, and Hoff, of University of Michigan Dental School, responded.

TABLE 1.—AGES OF STUDENTS OF NORTHWESTERN UNIVERSITY DENTAL SCHOOL AT THE TIME OF ENTRANCE

Age.	1904	1905	1906	1907	1908	1909	Total Students.	Total Years.
Eighteen	13	24	8	6	4	6	61	1,098
Nineteen	19	23	8	8	11	13	82	1,558
Twenty	22	23	14	15	18	21	113	2,260
Twenty-one	22	34	6	19	14	27	122	2,562
Twenty-two	20	32	13	15	11	23	114	2,508
Twenty-three	21	24	13	8	6	17	89	2,047
Twenty-four	13	24	12	7	11	10	77	1,848
Twenty-five	15	12	6	12	4	11	60	1,500
Twenty-six	10	9	7	7	6	7	46	1,196
Twenty-seven	8	6	3	6	6	6	35	945
Twenty-eight	4	9	1	5	2	2	23	644
Twenty-nine	8	8	2	4	2	3	27	783
Thirty	2	3	3	3	7	4	22	660
Thirty-one	2	4	1	4	1	1	13	403
Thirty-two	..	3	1	1	1	3	9	288
Thirty-three	..	1	..	4	..	..	5	165
Thirty-four	1	1	..	3	2	1	8	272
Thirty-five	1	2	..	1	1	1	6	210
Thirty-six	2	1	1	1	2	..	7	252
Thirty-seven	..	2	..	..	2	3	7	259
Thirty-eight	1	1	..	..	..	1	3	114
Thirty-nine	..	2	..	..	..	..	2	78
Forty and over	..	..	2	..	..	..	2	80
Total	184	248	101	129	111	160	933	21,730

Average 23.29.

TABLE 2.—AGES OF STUDENTS OF HARVARD UNIVERSITY DENTAL SCHOOL AT THE TIME OF ENTRANCE

Age.	1905	1906	1907	1908	1909	Total Students.	Total Years.
Sixteen	..	1	..	..	..	1	16
Seventeen	1	4	..	1	1	7	119
Eighteen	3	2	9	2	6	22	396
Nineteen	7	6	5	9	14	41	779
Twenty	9	9	13	11	15	57	1,140
Twenty-one	12	11	7	11	15	56	1,176
Twenty-two	17	4	4	6	5	36	792
Twenty-three	8	7	4	3	7	29	667
Twenty-four	3	4	7	4	6	24	576
Twenty-five	2	2	2	4	2	12	300
Twenty-six	5	4	3	2	2	16	416
Twenty-seven.	2	2	2	3	1	10	270
Twenty-eight	2	1	3	1	5	12	336
Twenty-nine	3	4	..	3	2	12	348
Thirty	1	1	2	2	4	10	300
Thirty-one	4	1	..	1	2	8	248
Thirty-two	2	1	..	1	2	6	192
Thirty-three	1	1	2	..	..	4	132
Thirty-four	..	1	..	1	..	2	68
Thirty-six	1	..	..	..	..	1	36
Thirty-seven	..	..	..	..	1	1	37
Thirty-eight	1	..	..	..	..	1	38
Thirty-nine	1	..	..	..	1	2	78
Forty	..	1	1	1	..	3	120
Forty-one	..	..	1	..	..	1	41
Forty-two	..	..	..	..	1	1	42
Forty-four	..	..	3	..	..	3	132
Total	85	67	68	66	92	378	8,795

Average 23.29

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[1] THE JOURNAL A. M. A., Sept. 6, 1902, and May 22, 1909.

TABLE 3.—AGES OF STUDENTS OF UNIVERSITY OF PENNSYLVANIA DENTAL DEPARTMENT AT THE TIME OF ENTRANCE

Age.	1905	1906	1907	1908	1909	Total Students.	Total Years.
Seventeen	3	3	3	2	2	13	221
Eighteen	13	17	22	16	21	89	1,602
Nineteen	25	40	40	26	26	157	2,983
Twenty	30	21	26	38	25	140	2,800
Twenty-one	31	33	29	23	28	144	3,024
Twenty-two	17	22	28	9	14	90	1,980
Twenty-three	11	13	23	12	7	66	1,518
Twenty-four	14	13	9	5	3	44	1,056
Twenty-five	9	8	6	5	4	32	800
Twenty-six	3	7	6	5	3	24	624
Twenty-seven	4	5	2	6	2	19	513
Twenty-eight	3	3	8	3	2	19	532
Twenty-nine	1	2	1	2	2	8	232
Thirty	2	1	1	1	1	6	180
Thirty-one	4	2	1	..	..	7	217
Thirty-two	2	1	1	..	..	4	128
Thirty-three	..	..	..	1	..	1	33
Thirty-four	..	..	1	..	1	2	68
Thirty-five	..	..	1	..	..	1	35
Thirty-six	..	..	1	..	1	2	72
Thirty-eight	..	..	..	..	1	1	38
Forty	..	..	1	..	..	1	40
Forty-four	..	..	..	..	1	1	44
Total	172	191	210	154	144	871	18,740

Average 21.53

TABLE 4.—AGES OF STUDENTS OF THE UNIVERSITY OF MICHIGAN DENTAL SCHOOL AT THE TIME OF ENTRANCE

Age.	1905	1906	1907	1908	1909	Total Students.	Total Years.
Eighteen	4	1	5	2	3	15	270
Nineteen	3	4	11	8	10	36	684
Twenty	3	5	8	4	10	30	600
Twenty-one	7	1	8	9	9	34	714
Twenty-two	5	2	9	8	4	28	616
Twenty-three	1	2	3	4	9	19	437
Twenty-four	4	1	4	2	1	12	288
Twenty-five	5	..	1	3	..	9	225
Twenty-six	3	1	..	3	1	8	208
Twenty-seven	..	..	1	..	..	1	27
Twenty-eight	1	2	4	1	2	10	280
Twenty-nine	1	1	..	1	..	3	87
Thirty	..	1	..	2	1	4	120
Thirty-one	2	..	..	..	1	3	93
Thirty-two	..	..	1	1	..	2	64
Thirty-three	1	..	..	..	..	1	33
Thirty-four	..	..	1	..	..	1	34
Total	40	21	56	48	51	216	4,780

Average 22.12

WHAT THE TABLES SHOW

The reports are interesting since they show the youngest to be 16 and 17 and the oldest 44, with an average in Harvard and Northwestern of 23.29, and in the University of Pennsylvania 21.53. I have known students to matriculate in the dental school as late as 54 years of age. The ages of matriculation in all the other dental schools must range in a similar manner. The fallacy of this argument must, therefore, fall to the ground.

In the university medical schools, the average is lower than in the regular medical schools. Thus in Harvard and Johns Hopkins the average is about twenty, while in the schools not connected with universities the average is from twenty-two to twenty-four. Students leave the high school in this country usually at eighteen to twenty years of age. The same is true of the gymnasium in Germany and the institutes of France.

The reason that medical and dental students matriculate late in life in schools not departments of universities is that most of these students have started out pursuing other avocations. Not making a success in their chosen calling or having a taste for the professions they have sought new fields for livelihood. Few of these men have taken a high school course or have even passed successfully through the grammar school. Every year the people are becoming more exacting in regard to the education of students for the professions. This will necessitate the students entering the profession direct from the high school, thus reducing the age of matriculation to a minimum. Students of dentistry entering the medical school at twenty can graduate with both medical and dental degrees at twenty-six, which is early enough for any man to begin the practice of a profession.

The stomatologist, having finished his two or three years of the fundamentals of medicine, now has the choice of two methods. He can finish his full course in medicine before taking up his specialty, or he can take three months in the summer for his clinical work and finish in one or two extra years, thus cutting off one year in his special course and adding one to his medical course. In either case he has spent only six years as against the seven or eight for other specialties. This is certainly not too much to expect of a department of medicine recognized by medical practitioners as the most important specialty.

THE ELECTIVE SYSTEM

The elective system in medicine, as recommended by ex-President Eliot, of Harvard, is meeting with much favor. There is so much detail in each medical specialty that no one student can master the subjects sufficiently to enter into a general practice of all. Special teaching is necessary even after the graduate has finished his hospital training.

A full and thorough course of two or three years should be required of all students in the major branch of medicine, and a satisfactory examination should be required, after which the student should select the specialty he desires to practice and with the aid of the Dean select such other branches as will fit in with those of his specialty. His special training in the stomatologic hospital (dental clinic) can be continued in the schools, which are now so well equipped for special work. The courses in both general and special medicine should continue throughout the year, divided into four quarters. By this method, the student can better select the course best adapted to each year's curriculum.

SPECIAL DEGREES FOR SPECIAL WORK

Should the elective system eventually be adopted, then all the "ologies" would specialize after the second or third year of medical study. This would simplify matters and the stomatologist would then stand on an equal footing with the other specialists. It would not be a bad plan also to confer the special degree of D.D.S. on such students as become proficient in special work. The specialties should be pursued as they are at the present time. Having finished his medical course, his special teaching should be shortened one year at least. The details of special instruction can only be worked out in the dental hospital on those students who have acquired a medical course. The student's special instruction should continue until he has become proficient in the different departments and has come up to a given standard. In other words, merit should be recognized, whether it be six months or three years. The standard of requirement should be established by a committee consisting of one delegate from each university stomatological department, or still better, by the state board of dental examiners.

REGISTRATION OF SPECIALISTS

The state board of medical examiners should register the graduate of medicine and the particular specialty he has become proficient in. The law should require him to practice that specialty. Should he find later that he is better adapted to practice some other specialty, he should pursue studies along that line, stand another examination before the state board of medical examiners and be licensed to practice that specialty.

It is to be hoped that the Council on Medical Education and the Association of American Medical Colleges will soon consider the return of the prodigal son to the mother profession, and not only make provision for his welcome back into the household, but also provide for the other brothers (specialists) that the fatted calf may be distributed equally to all children so that they may all eat and drink of the knowledge of medicine and make merry.

103 State Street.

HOW SHALL THE STOMATOLOGIST BE EDUCATED?*

JAMES E. POWER, M.D.
PROVIDENCE, R. I.

In discussing the subject "How Shall the Stomatologist be Educated?" I am conscious of the fact that true science aims at the attainment of truth; honest criticism and honest discussion are the only factors that will or can assist in the accomplishment of her aim. I do not assume an attitude of criticism; I am simply responding to a call which I consider to be the duty of every member of that profession which has greater possibilities for the future than any of her sister professions, socalled.

That there are branches of pathology, or I might say of pathologic physiology, which have never been explored, is a fact too obvious for discussion here. It is an accepted fact that dentists and dentistry have, in the services which they have rendered, accomplished facts which are only short of marvelous. If we read the history of dentistry and reflect on the strides which have been made in the preservation of the teeth, we may indeed point with pride to a noble record. But we must be honest with ourselves, and if we are to assist in placing this profession in that place which it should rightly occupy among the other professions we cannot content ourselves with the fact that it is so much better than it was twenty or thirty years ago; we must ask ourselves, in consideration of the number of the thousands of men and women who are going into the profession of dentistry—as well as those who have been practicing it for years, and in consideration of the number of dental colleges which exist to-day. Does this profession occupy the position that it should occupy at present? We all know the answer, and unless enthusiasm or deceit replace honest judgment and honest opinion, the answer spells, No. Now we must submit to a little self-examination and determine whether or not the fault lies with us as individuals or as a profession, or whether or not we are doing the best we can with the training which we have received at our dental colleges. It is reasonable to believe that most of us are doing all we can to make our profession the greatest in the world. Then to continue to reason along logical lines, the only conclusion is that our education is confined too much to the mechanical or artistic department of our profession.

WHAT DENTISTRY COMPREHENDS

Before proceeding further, let us here understand whether we consider that dentistry comprises merely the making of artificial dentures, extracting teeth and insertion of fillings, or whether it comprehends something more; for instance, whether it has a direct relation to histology and physiology; whether it should have a part in the interpretation of physiologic and pathologic metabolism; whether it should have a complete knowledge of those factors which preserve health and breed disease, not only of the teeth, but of the mucous membranes from the mouth through the whole alimentary canal, with all its adjacent and component parts? If we accept the former definition, then I say that we are highly trained technicians, and yet not as highly trained or as well developed in the manipulative skill as are some of our colaborers, who are not considered by us to belong to a profession at all.

If we accept the latter, then I say that our education is inadequate, and that in order to fit ourselves to fulfill the obligations which are expected of us, and to make our profession all that our fathers intended it should be, we are obliged to call for a change in the teaching of the future students of dentistry. Let us agree to stop asking for recognition, from a profession which many of us believe is only to be our equal, namely, the medical profession. There never was and there never will be either an individual or a profession that need call for recognition. Recognition is that indefinable something which is always thrust on the individual when that individual occupies the position which is deserving of such recognition. The world is the judge and the world gives the recognition as soon as we deserve it. No sooner, no later.

FOUNDATIONS IN DENTISTRY AND MEDICINE

That the foundation on which the dental graduate is sent into the world is greatly inferior to the corresponding foundation of the graduate in medicine is a well-known fact to all who have taken the time and patience to investigate the educational advantages of each. The dental graduate will tell you that he studied the same subjects as did the medical student. This is true, but the question is, Did he study them as thoroughly, or rather, was the standard for him and his medical brethren equal? In a large majority of cases he is laboring under a delusion if he believes that he knows as much, or even if he thinks he was given the same advantages in learning pathology, bacteriology, biological chemistry, or even anatomy, or physiology as was his medical brother. And now let me anticipate your question. Why? Because this branch of the science is taught by the professors of medicine, and in some instances the members of the dental faculty, who were graduated twenty-five or thirty years ago, do not seem to understand the importance of a proper medical education. We are apt to become subjects, if not indeed victims, of our environment, and the dental student is no exception to the rule. He breathes an atmosphere while on the dental side of the college, which may give his mind a bias. This condition of mind is not always correct, and when the student comes under the instruction of the professors of medicine, the men who are spending their lives in fitting the candidate for dental honors (for that seems to me the most important part of their life's work), the mind of the dental student is apt to be antagonistic to their teachings. If the mind was directed by the dental educators (the men who first meet the students) along the proper channels, it would be receptive and instead of leaving these departments with a superficial, or I might say an artificial knowledge, they would have a foundation on which they could and would develop the future of our profession.

WHAT THE COURSE SHOULD COMPRISE

I am firmly convinced that a complete medical education is absolutely necessary for the proper practice of what the profession of dentistry means to me. In replying to the first question, "When is it best to begin the special studies; during the time of the general medical studies or immediately after these?" I will state that the studies of the dental specialist should be postponed until after the medical education is completed. I do not believe that there should be introduced into the medical course any of the special studies of the dentist except those which are already recognized as belonging to the department of medicine. If we introduce any of the special studies during this time we are destroying that which we are trying to accomplish, a complete medical training and the mind of the student is again diverted from the direct pathway. The special studies of the dentist should commence after his medical education is completed and should consist of certain branches of prosthetic dentistry, certain parts of crown and bridgework, the fundamental principles which govern the correction of irregularities of the teeth, and oral surgery. One year should be sufficient for the above named studies. The operative dentistry should consist of a practical teaching of filling teeth. and a theoretical teaching of the composition of the various filling materials. The prosthetic dentistry should consist of how to make artificial dentures, and a theoretical knowledge of the material, eliminating all the antiquated methods of making artificial dentures, leaving this for the dental historians. The crown and bridgework course should be carried along the same lines as the prosthetic course, viz., eliminating the antiquated methods of doing this work, as well as its history.

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June. 1910.

Have men in charge in these departments who can and will teach the short methods of doing this work. *Orthodontia* can be taught as it is taught now. I am confident that one year would be sufficient for the proper teaching, as well as the proper understanding of the special studies required of the dentist. I realize that some may say it is unreasonable to believe that one year is sufficient to teach that which at the present time takes three years to teach. In replying I will state that there must be a revolution in the present teaching, and with a medical education the student has already learned all the material, which is now but poorly taught in the dental courses. His mind is more highly developed, as well as his powers of interpretation, not only of pathological, but of all conditions pertaining to the practice of a specialty, and the time required for a proper understanding would, of course, be shorter.

To me it seems impossible that a person can learn pathology without a microscopic study of all diseased tissue. How can we understand bacteriology without studying micro-organisms, both in culture media and under the lens of the microscope? How can we understand the subject of immunity and apply the vaccines and sera to the diseases which come under our specialty if we do not understand thoroughly that subject which is already revolutionizing the treatment of disease? There is not in reality, and there should not be in name, dental pathology, dental materia medica, *dental neurology* and dental hygiene, and numerous other dental subjects which are really a part of the great subjects themselves and are included in them. It is agreed that a great deal of time is wasted in the attempt to teach these subjects, and the shame of it all is that they are taught imperfectly. If we eliminate these subjects and revise the teaching of the dental subjects, then we will have the same amount of time for the dental subjects as we have now, only we have a better foundation on which to base this work, which at most could be accomplished in one year

THE DAILY SCHEDULE

Saturday morning could be devoted to the orthodontia clinic and Saturday *afternoon to* the oral surgery, this branch including the extraction of teeth; Monday morning to be devoted to the crown and bridgework clinic; every other morning to be devoted to the practical prosthetic work, and every afternoon, Saturday excepted, to the teaching of practical operative dentistry (filling of teeth, etc.). The treatment of the orthodontia patients subsequent to the visit at the clinic Saturday morning could *be carried on during the latter part of the afternoon of the* operating days, because it requires in the vast majority of cases, but a few minutes work. The lecture on operative dentistry, crown and bridgework, prosthetic dentistry, and orthodontia could be given at the first morning exercise, which could be easily arranged at 8:30. Commence the practical work at 9:30 and continue it till 1 o'clock. Resume the afternoon studies at 2 and continue till 6 o'clock.

CONCLUSIONS

Let us make up our minds to have more *of the real*, and less of the make-believe. Let us agree on the position we are assuming. If we are highly trained technicians, then reduce the hours of study by eliminating the *make-believe* part of our course. If we are highly trained scientific physicians of special diseases, then let us *substitute the* make-believe for the real; let us pursue *the same course* as do other specialists. Why hesitate to add our names to the honor roll, to follow the footsteps of the men who have already spent more time than I have outlined to get that medical education which seems an essential equipment for us to explore those regions which are now darkened by ignorance. The value of the medical education is already proved by the fact that most of the truly scientific discoveries are made by the men *and women who have supplemented* their dental knowledge with a medical education.

In conclusion let me add those words of Hunter which inspired Jenner to make one of the greatest discoveries in modern medicine, namely, vaccination: "Don't think; but try; be patient; be accurate."

HOW SHALL THE STOMATOLOGIST BE EDUCATED?*

M. H. CRYER, M.D., D.D.S.
Professor of Oral Surgery, University of Pennsylvania
PHILADELPHIA

The question of medical education for the dentist has been under discussion for many years, and it will probably continue to be a subject of discussion for many years to come. At the first meeting of the International Association of Stomatology, held in Paris, August, 1907, that body settled to its own satisfaction these two points, first, that a complete medical education must be required of every dentist; second, that the word stomatology was defined as meaning diseases pertaining to the mouth. A stomatologist is one who treats diseases of the mouth. In consideration of these two settled principles, the following series of questions was formulated and discussion requested:

(a) "When is it best to begin the special studies; during the time of the general medical studies or immediately after these?"

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

(b) "Advantage and disadvantage of each."
  (1) "Special studies begun during the general medical course."
  (2) "Special studies begun immediately after the general medical Course."
(c) "Length of time required for special studies of each system."
(d) "Details of special studies of each system."

As the words dentist and stomatologist, whether intentionally or not, are accepted in the statements as meaning the same, they will be used synonymously by the writer.

If the first settled statement be correct, that "A complete medical education must be required of every dentist," it demands that, in order to become a practitioner of dentistry or stomatology, a man must have a partial or full college education, depending on the medical school he enters, must attend a four year medical course, and according to some authorities he must serve as intern in some good general hospital for one and a half to two and a half years. This constitutes a "complete medical education" according to our leading medical authorities. It is very doubtful if such an education should be required of a dentist. But suppose only the four year course in a medical school be demanded; then the student in this country will have to spend three additional years in a dental school, unless he be allowed one year for his medical education. The best dental schools are advocating four years for the dental education; if this should take place then the student would have another year before he would be allowed to take his examination for a license to practice dentistry. According to this ruling a student must devote six or seven years to his professional studies after he leaves college to qualify for practice. By combining or overlapping the work of the two courses, the time spent can be reduced to six and occasionally five years when the two schools of medicine and dentistry are in the same university.

BEGINNING SPECIAL STUDIES

With these remarks the writer will endeavor to answer (a) and will assume that the two schools belong to the same university. If a student wishes to obtain the two degrees in less than seven years, he so announces it to the deans of both schools and arrangements are made accordingly. At the institution with which I am connected, for the past fifteen years the majority of students combining the two courses have entered both dental and medical schools, and the first year have had the same instruction as those studying medicine alone, viz, the fundamental branches of medical science such as chemistry, anatomy, physiology and pathology, together with some dental technics. In the second year a similar plan is followed, with an increase of dental work, and if a student has the ability he can complete the first two years of both courses, though he will not be up to the highest standard of those taking single courses in either school. The third year is devoted exclusively to completing his dental course, and he receives the degree D.D.S. at the end of it.

(b) Observe now what happens. It is an important point in the discussion, constituting a great objection to a complete medical training, under the present conditions, for a dentist.

(1) The last two years of the student's time are spent entirely in the medical school and are occupied chiefly in clinical work. He has not time for anything outside of this. He is thus drawn away from dentistry for at least two years. Not only does he suffer from failure to keep up with new dental methods, but his attention is riveted on the wide field of general medicine. All his surroundings are medical. Even in leisure and social hours he is surrounded by medical associates, joins medical societies, etc. By the time he graduates he finds his classmates taking intern service in leading hospitals, and he naturally desires to do the same. The student drops his dentistry with his D.D.S. and becomes a medical man. Case after case can be cited in which this has happened and but few can be mentioned during the last ten years in which a student who has obtained his dental and medical degrees in the institution spoken of, has practiced dentistry or has made a specialty of oral surgery.

Thirty-six years ago the M.D. and the D.D.S. degrees could be obtained from our leading schools in two years and a half. As the course of instruction in the medical and dental schools lengthened, naturally it required longer time to obtain each degree. Fifteen years ago, and even later, a graduate in dentistry from a reputable school was allowed one year on his medical course. But times have changed; a dental graduate to-day must spend four years in the medical school even if he be a graduate of the same institution, provided he has not combined his studies and taken his work as before mentioned, with that previous understanding.

With this experience, I cannot advocate the plan of taking up dentistry first and finishing with medicine, or of combining the two full courses in any way.

AFTER MEDICAL COURSE

(2) The second question to be considered is "Shall the student begin immediately after the general medical course?" If a student has a college education and has taken a four-year-course in a first-class medical school, it is doubtful if he can afford the time or will have the inclination to spend two or three years in a dental school, as his M.D. will allow him to practice any specialty of medicine which includes the diseases of the mouth. However, from experience, the writer does not believe that this finished (?) product would be best equipped to undertake the work of the stomatologist.

(c) Length of time required for special studies of each system. It is difficult to answer these questions which are based on the assumption that "A complete medical education must be required of every dentist," as I am not in favor of this plan as settled by the A. S. I.

In my opinion it is almost useless to discuss this subject unless we can get the cooperation of medical and dental schools. The medical schools of this country have settled, for the present, on certain definite rules by which they give a complete medical education, and are not likely to change their methods for the few dental students who wish a complete medical education. With the exception of the fundamental branches of chemistry, anatomy, physiology, pathology and bacteriology the teaching of the two schools is quite different, and cannot be given by the same teachers.

SUBJECTS MUST BE SEPARATED

In many conversations with teachers of medicine and dentistry, I find it generally considered that a student should not undertake these studies jointly. If he is to study medicine he must do so with all his faculties concentrated in that direction. If he is to study dentistry his mind during his study hours must be occupied solely with dentistry; otherwise he will be second to other students who devote their full time to one object.

If a man wishes to become a specialist in any branch of medicine, whether it be surgery, gynecology or ophthalmology, it is admitted by all medical teachers that that student must take the general course of instruction first. Then after graduation if he decides to become a specialist he can take special work in the branch he selects. In other words, he must be a doctor first. Now, if stomatology is to become a branch of medicine and require the M.D. degree, the student under existing conditions should enter the best medical college possible and take its full teaching. After graduation if he has not nged his mind, he must take up the special work of ntal profession, which will require at least two nd for most students it should be three; for there is very large amount of special work connected with dentistry or stomatology.

The plan of the A. S. I., proposing complete medical education of the stomatologist, can only be carried out by leaving the mechanical work of the dentist to persons trained especially for this work. For stomatology to become a specialty of medicine it would have to be given a place in the regular curriculum of medical schools as all the other recognized specialists are, instead of being left to a separate school of dentistry as at the present time; this would mean a complete revolution in dentistry. The training of the stomatologist would extend his field so much that he would be unable to give time to prosthetic or operative work. He would have full charge of medical and surgical cases affecting the mouth and jaws; not only diseases of the teeth and mouth itself, but constitutional diseases having manifestations in the mouth, such as syphilis and gout, also deformities such as harelip and cleft-palate, malignant growths of the jaws and tongue, injuries of the jaws, diseases of the maxillary sinus and associated pneumatic spaces.

Such work as the filling of teeth and dental prosthesis and the making of regulating appliances would be turned over under the stomatologist's direction, or subject to his prescription, *to a man* specially trained for each division of this work. His *relation* to this mechanical associate *would be analogous to that of the* oculist to the optician, *the orthopedic surgeon to the maker of braces, the general practitioner to the druggist.*

This idea *is being carried out* even at the present time
to a certain extent *by leading* dentists proportionately
as they extend their own fields. Many men have their
extraction, prosthetic and regulating work, etc., done by
associates under *their direction*, although in most cases
the *stomatologist* still attends to the filling of teeth;
but even this *would be dropped* if the idea of stomatol-
ogy as *a specialty of medicine* were carried out com-
pletely.

SUMMARY

My views summed up are as follows:

The primary object in the study of stomatology *or*
any other *profession* is not the obtaining of this or that
degree, but of gaining that special knowledge which will
best *equip* the student for the practice of his profession.
To illustrate this point, many examples may be cited of
men of high standard in the dental profession who have
the M.D. degree, and also those who have not. Both
have done and are doing great work for the advancement
of dentistry, not because they have this or that degree,
but because they have knowledge and the ability to im-
part it to others and to use it in practice for the good
of humanity. [illegible] s [illegible] rese [illegible] esigned to
The *full* [illegible] medi-
educate st[illegible]

cine. It is impossible to give the student more than a speaking acquaintance with the specialties.

To properly train a student for the practice of stomatology, a special curriculum should be devised consisting of the essential features of both the medical and dental curricula, with the non-essential subjects of both eliminated.

a. To begin with, the student must have a good general education and should have considerable mechanical inclination. If he has not the latter he will never make a dentist or stomatologist.

b. A period of at least two years should be devoted to the fundamental branches of stomatology comprising chemistry, anatomy, physiology and bacteriology essentially the same as the first two years of a medical course, and in addition, instruction in dental technics and other matters leading to the next period.

c. A period of at least two years devoted entirely to the study of the mouth including all branches of clinical dentistry and oral surgery. The latter would comprise all diseases relating to the teeth, jaws and associated parts. In this course there would be besides the lectures on oral surgery, ward classes and clinics in a general hospital. At the end of his time the student would receive a degree denominating qualifications to practice stomatology.

d. If the student desires to become an oral surgeon he should then have at least one year as resident stomatologist in a large general hospital, affording practical experience not only in operative and prosthetic dentistry, but also in treatment in diseases of the mouth and jaws, such as tumors, necrosis caused by syphilis, phosphorus and tuberculosis, cleft palate and hairlip, fractures, diseases of the maxillary sinuses and associated pneumatic spaces.

With such a course as has been outlined the graduate in stomatology would be fully qualified to practice his specialty and would have sufficient knowledge of the fundamental principles of medicine to recognize and discuss intelligently with medical men the relation of diseases of the oral cavity to general pathological con-[illegible]. This plan as regards oral surgical work has been carried out to a large [illegible] the past nine years by the combined dental schools of Philadelphia in connection with the Philadelphia General Hospital. This hospital has an oral surgical staff consisting of visiting surgeons from the various dental schools and two graduates in dentistry as internes. A clinic is given once a week by a visiting member of the staff, cases of interest to stomatologists are shown and operations on the face and jaws are performed. The clinic is open to graduates and students of medicine and dentistry, many of whom come from all parts of the world, and has the largest attendance of any clinic in Philadelphia. The internes serve from twelve to eighteen months each and have full charge of all cases in which the face, mouth and jaws are involved. They gain experience not only in their specialty, but by coming daily in contact with medical men and studying general pathologic conditions, their views are broadened and they become ideal members of the profession of stomatology.

1623 Walnut Street.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. TALBOT, POWER AND CRYER

Dr. J. N. Farrar, New York: A complete medical college course of instruction is necessary to success in any branch of medicine. The time needed for such education is the incubating period preparatory to any specialty. No specialty should be attempted without a complete course of medical instruction. Especially is this true in stomatology, if the deeper physiologic lines of the science and art of highest orthodontia are to be well understood.

Dr. Arthur R. Dray, Philadelphia: There was a time when the medical man was required to gather herbs, etc., and to make his own medicines. To-day, with few exceptions, he has neither time nor qualification to do the work of the pharmacist and druggist. So also to-day we find the dentist, compelled by the many calls on his time, to give much of his work to the mechanic. To-morrow the dentist will cease altogether to splash about with plaster of Paris and flasks, to burn his fingers pouring zinc dies or to smash his thumbs swaging gold plates in an effort to satisfy the patients' needs. The strictly mechanical man, not needing any medical knowledge whatever, will satisfy all these wants, leaving the dentist free to treat diseases and conditions. What does this mean? Why, that the dental student of to-day who spends three or five hours out of every ten in the laboratory, could put this time at the disposal of medical studies and operative work. In the best dental colleges of the United States to-day ten to fifteen hours or more a week of the schedule periods of the student's roster are spent in the mechanical laboratory learning a trade—a trade that could be better followed by a man devoting his whole time to it, who never need see a patient or operating chair. If in the medical curriculum of any reputable medical college the strictly dental specialties are inserted in place of the strictly medical specialties we have a good working idea of the studies which the dental student would have to take to qualify himself as a dental specialist of medicine. By strictly medical subjects I mean such subjects as orthopedics, gynecology, ophthalmology, obstetrics, mental diseases, medical jurisprudence, pediatrics, etc. The dental subjects should be taught in conjunction with the medical course, being focused on with special effort as the final years are reached.

Four years is not too long a period to spend in preparation for a lifelong work. Five or more years would be a better term. By suggesting the curtailment of the time spent on the strictly medical subjects I do not for one moment wish to imply that they should be altogether slighted, for my belief is and always will be that dentistry is a specialty of medicine and should not be followed until a medical qualification has been received. Let our dental schools of to-day give a special course if they wish, granting a special license and a special degree in mechanical dentistry, this course confining itself entirely to mechanics, lasting but two years; but let them not make an effort to work against impossibilities by teaching medicine and mechanics to the same student in less time than it takes to get a medical degree.

Dr. Eugene H. Smith, Boston, Dean of Harvard University Dental School: To my mind there are but two practical methods of educating young men for dentistry. One method is so to shape their education from the beginning that it will lead directly to the specialty of dentistry; the other is first to give them a general medical education leading to the degree in medicine, and to follow this with two years of special training. In either case the preliminary training should not be less than that obtained in a four years' graded high school, which fits students to pass the entrance requirements to our leading colleges.

By the first method, if we are training students for a dental degree alone, the first year should be devoted to the fundamentals of medicine, namely: histology, physiology, bacteriology, and physiologic and dental chemistry. General chemistry should be required for entrance. The first-year medical studies should be planned to give special and advanced training on subjects that especially concern the dentist. The second and third years should be spent in a dental hospital. The clinical work should be carried on in conjunction with lectures, and the students should be taught to make application of the medical work of their first year to the cases they treat in the hospital. I think it a mistake for a dental student to have training in special dental work during his first year of study.

The second method of training a student in dentistry is to enter him as a regular student in a first-class medical school and have him obtain the M.D. degree, after which he should enter on a two years' course in a dental school leading to a dental degree.

Modern dentistry has become so extensive a profession in itself, and modern medicine so vastly different from the medicine of a few years ago, that it is a serious question in my mind whether a student can be properly educated in medicine and in dentistry in less than six full years. If I could be sure that the combined medical and dental training that I have outlined would produce skilled men as well as scientific men I should be strongly in favor of such training. I think, however, that there should be two degrees indicating this training, rather than to have dentistry practiced under the one degree of medicine. We must never lose sight of the fact that in a specialty in which so much technical skill is required it will always be necessary so to shape our courses as to produce skilled practitioners, even though we may do it at an expense of scientific men, using the term "scientific" in its broad sense.

Dr. M. H. Fletcher, Cincinnati: I am in thorough accord with the idea that many dentists, if not all, should have a complete medical education in addition to their mechanical training, since it fits one most satisfactorily for the practice of stomatology. In fact, I do not see how one can be fitted for the practice of stomatology without a full medical education, any more than one can be prepared as an oculist or throat and nose specialist without medical training. No dental college of which I have any knowledge so fits a student, since the dental courses in anatomy, physiology and pathology are decidedely inadequate. The average dental operation can be well performed without much knowledge of the laws of health and disease of the tissues, but the successful treatment of diseased tissues in the mouth and their systemic effects requires a knowledge such as can be attained only by taking a complete course in medicine and surgery.

My own judgment is that we should have stomatologists and dentists; let the dentists stop where they do now, but a student in stomatology should first take his work in the mechanics of dentistry and follow this by special medical work, the two overlapping in the middle of the course, for instance the mechanical overlapping the medical in the later part of the second year or the beginning of the third, ending the course with the medical work in the fourth or fifth year according to the length of the course. In a five-year course (which I think is short enough) the first two years should be devoted to dentistry, the medical studies beginning in the third year while the dental work is being finished. The last two years should be devoted to a medical course and hospital work such as is now required of medical graduates in the average American medical college with clinics and practice in higher dentistry, oral surgery and treatment of the diseases of the mouth.

The difficulty about the practical working of this or any plan requiring dentists to take a full medical course is that, if one spends the time and energy to take a medical course, he is almost sure to practice medicine and not dentistry nor stomatology, for the reason that the returns in medicine, both intellectual and financial, are greater than they are in dentistry or stomatology.

To be a perfectly fitted stomatologist requires greater versatility and training than does either dentistry or medicine alone, for a stomatologist must be first a skilled mechanic and artist, then a well-posted physician and surgeon. I believe that neither the fees nor the breadth of the scope in this specialty are great enough to attract many to it who have the capacity to do both well, and I imagine that for some time in the future, as in the past, we shall have many dentists and very few stomatologists. I believe that there should be a special degree conferred in certain colleges to distinguish a stomatologist from the average dentist.

Dr. Stewart L. McCurdy, Pittsburg, Pa.: As a practitioner of general surgery as well as surgical stomatology, I have observed first, the lack of knowledge on the part of the dentist of the general medical branches, and second, the lack of knowledge on the part of the medical practitioner of oral diseases.

The remedy, it appears to me, would be plain, i. e., more medicine for the stomatologist (dentist) and at least some oral pathology and surgery for the medical student. The physician knows practically nothing of the pathology of the mouth. That the future will have in store for students a four-year course for dentists and a five-year course for medicine is a probability. When this does occur the method of instruction will, no doubt, be for students in both medicine and dentistry, to take the same course for two years. This will leave two years for the stomatologist to complete his course and three years for the student who desires to specialize in medicine to complete his course.

Dr. J. P. Gray, Nashville, Tenn., Secretary of the Department of Dentistry, Vanderbilt University: I am not quite sure that I could recommend a full medical course for dental students. I fear that the length of time would prevent a student from first taking a medical course and a dental, and that the majority of students applying for a dental course would not go further after taking the medical. Most men would not have the means to do this extra amount of work. I would require the dental student to take the first two years of the fundamental branches of medicine with the medical students, being required to do all the laboratory work required of the medical student; then I think it would be better—if it could be so arranged with the medical schools—to eliminate some parts of the medical course, and in addition to substitute some studies of the dental course. Some of the work in the dental schools might be eliminated, but most of it should be given in connection with the medical course. There is no reason why gynecology, obstetrics and other medical branches could not be taken out of the medical course for the dental student and yet a degree be given commensurate with the work done by the latter. The dental branches require considerable amount of technic—more than is required in ophthalmology and otology—and a student should have some of this technic in his junior and senior years. By the elimination of the extra branches in medicine and the addition of the dental it seems that a sufficient amount of technic and dental instruction could be imparted, and a student would still have a course equal to that of some other branches of medicine. If we are to give a purely medical course, I should make the students take up the study of the fundamental branches the first two years with the medical students; then I should give the dental course with a few of the medical studies, leaving the technic for the third and fourth year of the school, and add one year more to the completion, making five years.

I have not found in my experience of twenty years as a teacher that medical men coming to us—and we have had quite a number—make first-class operators. It may be that we have received those who have been failures in medicine. I can recall but one man who made a good student and who really was highly benefited by having studied medicine. I think that the medical schools are making a mistake in not allowing some credit to students who have attended dental schools. I know the courses given here in the fundamental branches, such as anatomy, physiology, histology, pathology, materia medica and therapeutics, should give a man at least one year off, if not one and one-half years in the medical school. If they were not satisfied with them after an examination, they might then dismiss the student. The medical colleges could find out the dental schools worthy of recognition. I do not think the course in some dental schools worthy of recognition by the medical schools.

Dr. N. P. Colwell, Chicago, Secretary of the Council on Medical Education: No man should pose as a specialist in the treatment of any class of human ailments, whether diseases of the eye, of the stomach, of the nervous system, or of the mouth, unless he has first had a full medical training. Whether every dentist should first have a complete medical training or not is a question which may need considerable discussion. It may certainly be said, however, that there should be some way to distinguish between the dentist who has had a complete medical training and the one who has not. Certain it is that the former is in position to recognize more clearly causes of certain diseases of the teeth and gums than the latter, and, therefore, is enabled to treat such conditions more intelligently.

Suppose, therefore, that all dentists shall first have a complete medical course, followed by the course in dentistry. This would mean, first, that all dentists would have a better preliminary education which would include a training in physics, chemistry and biology; second, they would have more thorough courses in the fundamental medical sciences of anatomy, physiology and the like, which are now only briefly touched on in the usual course in dentistry; third, they would all have a knowledge of the etiology, symptoms, prognosis and treatment of the more common diseases not now possessed by most dentists; fourth, it would mean a higher order of intelligence of those who are to practice dentistry, and last but not least, it would mean more intelligent treatment of patients, more permanent fillings in tooth cavities, more prompt treatment of many diseases of the gums and the prevention of many such diseases and of their sequelæ, such as diseases of the antrum of Highmore, of the frontal and accessory sinuses and the like. Furthermore, if all dentists were so educated there would doubtless be a more effective movement to educate the public to more proper care for the teeth.

The chief objection would be the more prolonged course of study required, but if the dental profession, like medicine, is already overcrowded, then the future should possibly develop fewer but better dentists even as in medicine the demand is for fewer but better doctors, or, as President Faunce puts it, "fewer doctors but more doctor." After the completion of the four-year medical course it would not require an additional three years to complete the course in dentistry, since many of the subjects would already have been completed in the medical course and much more thoroughly studied than in the usual course of dentistry. Anatomy, physiology, chemistry, pathology and possibly over half of the dental course would have been completed. The time for the two courses might be further shortened by allowing the election of certain special courses in dental anatomy, dental physiology, dental pathology, dental surgery and the like, thereby leaving for a fifth year the strictly dental subjects and for clinical courses in the special study of diseases of the mouth. Since many systemic diseases have some of their first symptoms appear in the mouth which would be discovered by the routine examination of the gums and teeth, it is very important that the subject broached in Dr. Talbot's very able paper be given the most careful consideration.

Dr. Arthur D. Bevan, Chicago, Chairman of the Council on Medical Education: The problem of the stomatologist's education is certainly a difficult one to solve. It seemed to me that if five years could be devoted to the study of dentistry, the student might put in the first two years in the scientific laboratory branches with the regular medical student, and that he might take one year in general clinical medicine and surgery and two years limited to oral surgery and dentistry. With such a training, I should think that he should receive the same sort of a degree and be recognized as a doctor of medicine limiting his work to stomatology and with just as much right as the men who are limiting their work to diseases of the eye, ear, nose or throat. It would seem to me that such a course would give him a broad training for his work.

Dr. John M. Dodson, Chicago, Dean of the Medical Courses, University of Chicago: True stomatology bears the same relation to general medicine and surgery that is borne by ophthalmology, laryngology, gynecology or any of the specialties which have to do with particular organs, or portions of the body. Doubtless dentistry, in its present narrow or restricted form as a mechanical art, has grown up independently of medicine because the purely mechanical side of that vocation—the filling of teeth, the manufacture of artificial substitutes for the teeth, etc.—occupies so large a part of the time of the dental practice.

It seems clear to me, however, that the disease of the mouth and teeth are so intimately related to pathologic states in other portions of the body that they can be intelligently and successfully treated only by one who has been thoroughly educated in medicine. I believe, therefore, that the stomatologist of the future will be, first, a well-educated man, who has secured as the very minimum of preparation for his professional study, the equivalent of four years in high school, plus two years in a literary or scientific college; and, second, an educated physician, which means, at the present time, four years of training in a well-equipped medical school, this to be supplemented by at least a year of training, as an intern, in a general hospital or its equivalent in general practice outside a hospital and, third, a specialist, qualified in the treatment of diseases of the mouth and teeth by at least two sessions (eighteen months) of attendance and training in the dental department of a university. A similar course of training for the other special branches of medicine is now provided in at least one of the university medical schools.

Possibly the individual then adequately prepared for the practice of stomatology will find it of advantage to relegate a considerable portion of the purely mechanical part of his practice, *e. g.*, the manufacture of artificial dentures, of crown and bridges, of gold and porcelain inlays, to artisans who will devote themselves wholly to such work. It is idle to contend that because the fundamental medical sciences (anatomy, physiology, etc.) are included in the curriculum of the dental school, the dental student receives an education in these branches at all comparable to that acquired by the medical student. The medical school was forced to abandon the practice of granting to the dental graduate, advanced standing in these subjects because his preparation in them was found to be wholly inadequate for the intelligent study of clinical medicine. When dentistry or stomatology comes to be generally taught in a thorough and effective manner, then and then only will it be entitled to rank among the recognized special branches of scientific medicine. There are to-day a number of stomatologists of this type—men who are graduates in medicine as well as in dentistry.

DR. FREDERICK B. NOYES, Chicago: The development of the last ten years has divided medical education into two periods of two years each, the first devoted to the study of the medical sciences, the last to the application of them to the practice of medicine. The stomatologist requires the same training in the medical sciences, but the second period should be given to their application in the treatment of diseases of the mouth. That this will be about the line of progress in the future seems certain to me. It is absurd to suppose that the stomatologist should have the same training in gynecology, obstetrics, amputations, abdominal surgery, or histology, pathology, materia medica, etc., as the medical men.

After fifteen years of teaching in the dental schools, I feel that the greatest fault to be found, at least with the better schools, is the quality of the elementary work, and that this spoils the quality of all the professional studies. This condition is not confined to the theoretical or scientific subjects, but is true also of the technical and mechanical departments. There has been too much crowding for the accomplishment of a large amount of dummy dental operations requiring the construction of a specimen of every new type of bridge or denture, and especially every pet device of the instructor and too little attention to the acquirement of skill. Judged from the standpoint of the fine mechanic, the average dentist is not skilful. There has been too much tendency to despise the mechanical side of dentistry. I believe that at the present time the dental schools fail to make a reasonable percentage of their graduates mechanically skilful, and that those who excel in skill do so because of a training acquired outside of the dental schools.

It seems very desirable that the stomatologist's course should be so planned that it could be begun immediately after high-school graduation, but so as to induce as many men as possible to take more collegiate work before beginning their professional studies. This would be accomplished if two years of collegiate work before the first two years of professional work would give the B.A. or the B.S. degree. But students entering professional work direct would receive only the professional degree. The decision between stomatology and medicine should be made at the beginning of the professional work, or, in the former course general mechanical training should be given, with the fundamental medical science. This should be in the form of applied mechanics of the finest order and designed for the acquirement of skill in the handling of tools. In the last two years the technical training should be in the application of the skill acquired to the performance of dental operations and the pursuit of the medical sciences into the field of stomatology. Finally let me repeat that at the present time failure to do thorough work in the elementary subject, both scientific and practical, is the greatest fault. Three years is too short a time to do what is undertaken in the dental school and, more important than this, dental students are not required to work as hard as students in other departments of the university. The work is arranged for the poorest students. The best students find it is easy to do what is required and have not sufficient incentive to do any more.

DR. GEORGE V. I. BROWN, Milwaukee, Wis., Professor of Oral Surgery and Oral Pathology in the State University of Iowa: The ideal medical course, one comprehending premedical education leading to a degree in arts or science, then four years of medicine, at least a year of hospital service, and then approximately two years of post-graduate preparation for special or other practice, and at best a few additional years before an independent practice can be acquired, is no longer ideal when one stops to realize the hardships it entails on the less fortunate though often worthy students and the crippling of the best usefulness of many other individuals by destroying the first enthusiasm of youth and postponing the day when they can seek independence, in this day of intensely active business and professional pressure, until they have arrived at a mature age, when such knowledge comes slowly, or at the expense of much hardship if at all.

All this does not imply that these courses should be shortened, for on the contrary they are essentially necessary, but it does mean that there must be reconstruction of the educational system from the primary school up, in order that more advanced or at least better selected work may be done before entrance to college. The gymnasium in Europe accomplishes this. Why not our high schools?

The first year's course as now arranged for dental students in university and the best other schools requires attendance on nearly all of the same classes as the medical students, and in addition thereto a considerable number of hours of special laboratory work. The result is, that students of dentistry cannot as a rule do the thorough work required of students of medicine, and to this extent at least, the educational result is defective; therefore these students are not entitled to full medical credit for this portion of the work. Slight rearrangement of the curriculum by having one freshman branch carried forward to the sophomore year and an equivalent reduction in the number of laboratory hours for operative or prosthetic technics, would enable them to fully qualify in all medical branches taken at this time and yet have the advantage of early manual training. Continuance of this system from year to year would create practically no confusion and in the fourth year which as now arranged in medical colleges is largely devoted to clinical work, the branches carried forward could be completed and dental operatory work begun. An additional year of clinical, surgical, medical and dental operatory work would in five years give better preparation than could be accomplished even in six years if either medicine or dentistry alone were completed and the other taken as a post-graduate course.

The plan of work outlined could, if desired, be inaugurated at the beginning of any term in any high-grade medical college without serious disturbance of courses as now arranged, and is sufficiently elastic to keep pace with any changes in the curriculum that advancing conditions might make necessary without creating disharmony in the schools directly interested.

DR. FRED C. ZAPFFE, Chicago, Secretary of the Association of American Medical Colleges: I have the highest regard for dentistry, and I would not for a moment have it thought that I disparage the tremendous advances that have been made in that specialty. But dentistry has arrived at the parting of the ways. It must establish itself either as a profession or a trade, an art or a science. It has always seemed to me that dentistry, to be regarded as a profession, should ally itself with the professions. As it is to-day, dentistry is neither a profession nor a trade. It is practicaly in the same class as optometry. Dentistry has extended beyond its original scope—the treatment of diseases of the teeth; it now comprises the treatment of all the diseases, injuries and malformations of the mouth. It is really on a par with ophthalmology, otology, laryngology, etc. And yet, the ophthalmologist, before he can be regarded as proficient in his specialty, must have a medical foundation and from three to five years of special study. Medical educators are keenly alive to the necessity of devoting more time in the college course to general medical education, and less to the so-called specialties in medicine. The specialists insist on thorough preparation in the fundamental and subsequent study in the chosen specialty, because a thorough knowledge of the fundamentals in medicine is a prerequisite to competent and efficient specialization. But note that there must be the preliminary training in the fundamentals. At least half of the course in dentistry to-day is given over to the study of fundamentals, which are the same as those in medicine. Dentistry must properly be regarded as a part of medicine. It is based on a proper comprehension and understanding of the causes and the development of diseases of the mouth and teeth. It is no longer merely a matter of knowing how to prepare a cavity and to fill it with suitable material, or of knowing how to construct an artificial denture. That is the mechanics of dentistry and is on a par with the work of the optician.

The dentist must know why the diseased condition is present; what it means, and how it can best be treated. He must have more than finger training; he must know pathology. To know pathology, he must know anatomy, physiology and chemistry.

He can get such training in the medical school better than anywhere else. Why not, then, elevate the practice of dentistry to the distinctly professional plane? Why not establish it as representing special study? Why not make the dentist in every way a better man professionally and educationally than he is to-day? Let him get his special training after he is well grounded in the fundamentals. The specialty of dentistry will then occupy the same plane as ophthalmology and the dentist will be a graduate in medicine, with special training in the treatment of diseases of the mouth—in other words, a stomatologist.

Just how much special training he should have the stomatologist must determine. Schools of stomatology and stomatologic societies will take care of that. An education in stomatology will not be any more costly than an education in dentistry, and the graduate from such a course will be better equipped, better prepared to practice his specialty and regarded as a professional man and not as a dentist.

Dr. H. A. Potts, Chicago: At the meeting of the National Association of Stomatology, held in Paris, in 1907, it was settled that a complete medical education must be required of every dentist. Granting this, the problem of securing it confronts us.

The dental school which requires a medical degree for entrance will go begging for students, and many who do enter will be those who have made a failure in medicine. On the other hand, the best-equipped dentist will be the one who, after receiving his dental degree, continues his medical studies, finally receiving his medical degree, followed by an internship in the free dental dispensary, much the same as is now required by some medical schools.

One solution of the problem would be, first, to have the dental colleges and medical colleges under university control, with the same requirements for admission to each; second, with the dental college and medical college, belonging to the same university, be situated near each other; third, that the departments of dental histology, dental physiology and dental pathology be established in the medical school; fourth, that the medical students and dental students take the same courses for the first two years; fifth, that the dental students then pursue their clinical dentistry and the medical students pursue their study to completion.

Thus the medical student will have gained more knowledge of dental conditions as they are related to medicine, and the dental student will have acquired some knowledge of medicine, which is sadly lacking under the present régime.

The dental student, and many a graduate as well, looks on a patient with some pathologic condition of the mouth as being "in his line" or "out of his line" of treatment. When he has filled all the carious cavities, he thinks his work is done. He should be able to group the whole pathologic picture and know the relation of conditions in the mouth to other conditions of the body which require medical treatment, in order that he may intelligently call in counsel or refer the patient to some one capable of caring for him. In other words, he must be able at least to make a probable diagnosis of the case in general, just as in medicine, it is not enough that a physician make a diagnosis of pulmonary tuberculosis; he must be able to say how far advanced it is; he must know the condition of the digestive and eliminative organs, what complications exist, whether the patient is a menace to the health of others, or not. Tersely, he must be able to make a complete diagnosis.

The dentist should have courses in physical diagnosis, both clinical and laboratory. His experience in handling patients in the free dispensary of the medical school will be of inestimable value to him in handling his own dental patients. Only by actual work in inspection, palpation, percussion and auscultation on patients suffering from various diseases will he be able to grasp the whole picture and become familiar with the living pathology of the mouth, and see its connection with general pathologic conditions. If he fails in this, his medical degree and the time taken to attain it have been for naught.

Dr. Eugene S. Talbot, Chicago: I am surprised and pleased at the unity of opinion expressed by the able teachers coming from different parts of the country and occupying such varied positions in the teaching world both in medicine and dentistry. On one point all agree and that is all dentists should be stomatologists practicing under a medical degree. All seem to agree that the medical course should be so arranged that the fundamentals of medicine should be the foundation on which to build all specialties. First obtain the medical degree and the specialties studied afterward. This will place all specialties on an equal footing. This method seems reasonable and easy to accomplish.

Like the medical schools in this country, there are more dental schools than can exist. There is no need of more than one school in a state. Let the weaker schools unite with the stronger or disband. About fifty-four medical schools have either given up or joined stronger and better equipped schools in the past five years. Twenty or twenty-five dental schools can go out of existence and never be missed. Let twenty-five of the best schools become actual departments of universities and an ideal specialty can thereby be developed.

INTERMITTENT CLOSING OF RETINAL ARTERIES *

ARNOLD KNAPP, M.D.
NEW YORK

Disturbances of the retinal circulation causing loss of vision are exceedingly complex, and are still imperfectly understood. There are unquestionably some conditions which are not due to embolism or thrombosis. Temporary obscurations are not infrequent clinical manifestations of a disturbed retinal circulation, and they often precede permanent, partial or complete blindness.

These attacks of temporary obscuration were formerly attributed to embolism; the plug supposedly at first obstructed the main trunk of the retinal artery, and later lodged in a branch (Graefe, Mauthner, Schnabel and Sachs). This theory was later abandoned, because of the number of recurring attacks without any evidence of the subsequent fate of the embolus (Loring, Wagenmann).

According to Ole Bull,[1] Zehender was the first to draw attention to vessel cramp as a cause for sudden amblyopia and amaurosis. Benson[2] has reported on a case of intermittent obscurations in which he examined the patient during an attack and found the inferior temporal artery to be bloodless. This condition promptly disappeared, and later the ophthalmoscopic examination gave almost negative results. Dr. Benson thought that spasm probably determined the attacks. Wagenmann[3] examined a patient with recurring obscurations

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* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

[1] Krankh. d. Retinalgefässe, Leipsic, 1903.

[2] Trans. Eighth Internat. Ophth. Cong., Edinburgh, 1894.

[3] Arch. f. Ophth (Graefe), 1897, xliv, 220.

during an attack and found both arteries and veins contracted. Iridectomy checked the process for seven months; then an attack with permanent blindness supervened. This author believes that the attacks can only be explained by vascular spasm, the local cause being arteriosclerosis. Galezowski has directed attention to the positive existence of vascular spasm of the retinal arteries and its relation to arterial thrombosis. Ole Bull[1] believes that angioneurosis may be as frequent a cause for circulatory disturbances in the retinal vessels as embolism or thrombosis, and that all cases of obscurations are due to cramp, especially as spasm is likely to occur when pathologic vessel changes are present and often leads to a thrombus formation. Osler[4] states that in certain stages of arteriosclerosis arteries are very prone to spasm.

Russell,[5] in a paper on "Intermittent Closing of Cerebral Arteries," suggests the term closing to express this vessel action and describes loss of brain power from intermittent closing of cerebral arteries (temporary paralysis) as it takes part in the production of permanent paralysis. This closing is caused by vessel changes effected by means of the muscular coat; it is partial or complete, producing impairment or complete suspension of function.

As examples of local closing there is the local syncope of Raynaud's disease. Raynaud[6] states that he observed a cramp of the retinal vessels in the sickness which bears his name, but Panas,[7] at Raynaud's request, examined some of his patients and failed to find any difference in the caliber of the vessels during the access of asphyxia. The contraction of retinal vessels in this condition has, however, been found by a number of other observers.

In this group of vasomotor phenomena belong contractions of the retinal artery in epilepsy, malaria, whooping cough and migraine.

As examples of local closing in diseased retinal arteries I wish briefly to report the following cases:

CASE 1.—J. B., male, aged 66, was first seen on Aug. 18, 1909, with acute glaucoma in both eyes. The vision in the right eye was 5/200; in the left m. h. Tension was very much increased in both eyes. The man had suffered from prodromal glaucomatous attacks in the right eye for one year and a gradual contraction of the nasal field in the left eye.

Treatment.—He was prepared for operation by eserin, leeches and cathartics. The tension was reduced, and vision in the right eye was 20/70; field normal. In the left it equalled 20/200; the field was contracted to an oval in the temporal half of the field. Iridectomy was performed on both eyes under ether without accident.

Result.—At the first dressing the patient claimed that he could not see with his left eye. The condition remained unchanged though the tension in both eyes was normal and the healing smooth. Ophthalmoscopic examination of the left eye revealed an atrophic disc, no cup, no hemorrhage, but the retinal artery was very narrow, with variations in caliber and white sheaths. Vision was reduced to faintest light preception. The right eye sees 20/30; field is slightly contracted nasally and below. The disc is pale; no cup; distinct endarteritis. The patient showed organic cardiac lesions, general arteriosclerosis and senile paraplegia.

In this case the sight in the left eye was lost after an operation through no fault of the operation or treatment. A plausible explanation seems to me to be that the already narrowed blood vessel in the left eye through some nervous or unknown influence became closed for a sufficient length of time to cause permanent loss of sight. It is another example of the interdependence of glaucoma and arteriosclerosis.

CASE 2.—R. B., aged 53, was first seen on Jan. 29, 1910. Eighteen months ago the vision in the left eye failed suddenly, then improved somewhat, though at present there is only light perception in temporal field. Recently, after severe right hemicrania for four weeks sudden loss of sight occurred in the right eye; after one and one-half hours vision returned.

Examination.—Right eye: pupil was normal; vision 20/100; field normal; retina edematous. The veins were full; the arteries distinctly narrowed. Left eye: disc white; veins tortuous; arteries very narrow. Urine was normal. There were chronic cardiac hypertrophy (valvular lesions), and arteriosclerosis. Blood pressure was $\frac{\text{V. } 265}{\text{H. } 260}$; pulse $\frac{\text{V. } 76}{\text{H. } 64}$; apex beat 5½ inches to left of middle line in fifth space. Sounds at apex were of equal intensity.

Subsequent History.—The patient has been taking nitroglycerin and iodid of potassium. On March 9, 1910, right vision was 20/50; disc normal; veins tortuous, irregular outline; indented; arteries tortuous; often abruptly narrow and nearly invisible; no perivasculitis; one small hemorrhage. Left eye: vision m. h.; disc atrophic; arteries very contracted, often invisible.

Without any periods of obscuration in a patient with general and retinal arteriosclerosis the vision was lost suddenly in the left eye; the condition has remained unchanged. One and one-half years later the vision in the right eye was lost for one hour and a half, and was then regained.

CASE 3.—R. L., aged 32, for many years had periods of obscuration occupying either lower or upper half of field, varying in either eye; only one eye at a time was affected. These attacks would last five minutes. The patient suffers often from headache, nausea and vomiting.

Aug. 20, 1909: Present attack began six weeks ago and loss of vision has persisted. Right eye: lower half of field is defective. Superior retinal artery is very thin, with a faint red line; it resembles a wax cast. At a short distance from the disc the caliber of the artery becomes normal.

Nov. 2, 1909: The patient has had several attacks of temporary obscuration in left eye since right eye was affected. There is apparently no cause for these attacks. The upper half of the field is always involved. The inferior retinal artery is full, rounded, hard; no indentation of veins.

In this patient after periods of obscurations the sight in the lower half of the field in one eye was permanently lost, and there have since been some attacks in the upper half of the field in the remaining eye.

CASE 4.—C. A. L., aged 60, has general arteriosclerosis, and was first seen on Sept. 21, 1909. Recently there was sudden loss of vision in the right eye, which gradually improved. Now vision is 10/200; retina edematous; marked constriction of arteries; veins full; relative defect in nasal field.

October 27: R. 20/40. Five days later, after mental excitement, there was another attack of blindness principally in right nasal field which passed off.

Jan. 5, 1910: R. 20/30. Inferior temporal artery is distinctly obliterated at one point. Both superior and inferior temporal arteries show caliber variations.

The sight was suddenly lost in one eye and then gradually regained. Subsequently after an emotional outbreak vision was again temporarily obscured in the same eye.

CASE 5.—M S., aged 63, had had no previous obscurations. There was marked general arteriosclerosis.

October 23: After headache and vomiting, was totally blind on awakening. There was no history of having taken any drugs or wood alcohol. Pupils were fully dilated; there was retinal edema. Arteries were small, veins were changed; no pulsation on pressure; no light perception.

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[4] Allbutt's System, Edition 2, vi, 627.
[5] Brit. Med. Jour., Oct. 16, 1909.
[6] Quoted from Dufour, Encyclop. Française d'Ophthal., vi, 117.
[7] Traité des maladies des yeux, i, 619.

October 26: General return of pupillary reaction, light perception in temporal field. Arteries remain very small.

October 30: R. 4/200; L. 2/200; retinal edema; optic discs pale; arteries thin and outlined in white. Gradual deterioration.

December 16: R. 2/200; L. 1/200. Field showed concentric contraction.

January 1: Pupils wide; irresponsive; R. m. h. in temporal field; L. = O.; arteries invisible; optic disc atrophic.

March 1: Patient totally blind; arteries invisible for short distance from disc.

November 1: R. glaucoma T. +.

In this case both eyes were simultaneously affected. There was at first some return of vision, which, however, was completely lost after three months. The ophthalmoscope showed at first retinal edema and narrowed arteries; later optic atrophy with obliterated and sclerosed vessels.

Intermittent closing of healthy retinal arteries may occur without any lasting effect on vision. In diseased retinal vessels this phenomenon is of grave significance, as the vessel may remain obstructed or lead to thrombosis. In subjects with retinal arteriosclerosis, especially if obscurations have been present, a rigid general treatment of the arteriosclerosis should be given, mainly with a view of preventing any of the causes which seem to contribute to closing of the arteries.

26 West Fortieth Street.

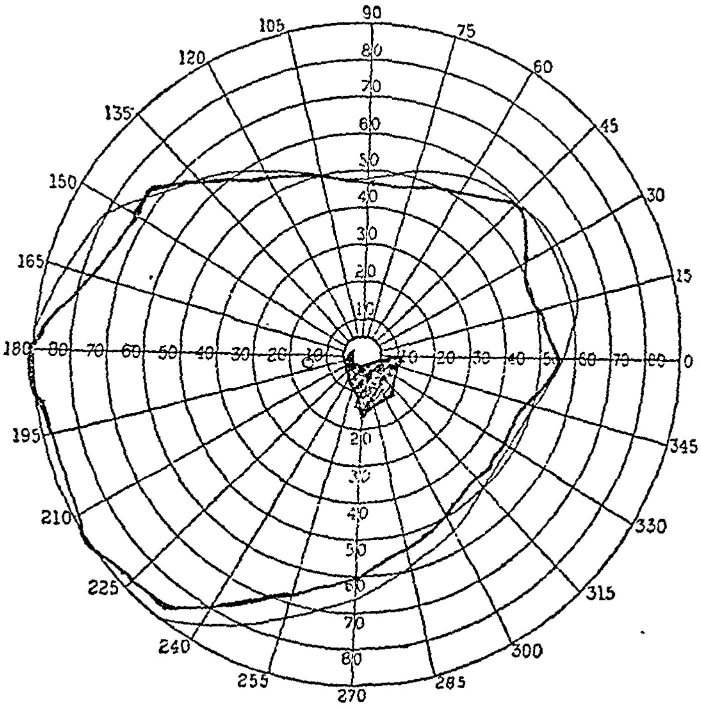
ABSTRACT OF DISCUSSION

Dr. W. C. Posey, Philadelphia: In a paper entitled "Transient Monocular Blindness," which I read before the College of Physicians in 1902, I reported a series of cases similar to those described by Dr. Knapp. Dr. Knapp states that Ole Bull gives credit to Zehender for being the first to draw attention to vessel cramp as a cause for sudden amblyopia and amaurosis, but fails to mention the date at which this observation was made. As far as I could judge from the study of the literature, Loring, in 1874, was the first to make any extensive communication on the subject of transient attacks of blindness, although Alfred Graefe, Hedaeus, Rothmond, Secundi, and others had reported isolated cases, where this symptom had occurred in connection with excessive reduction in the diameter of the retinal arteries. Loring based his study on the observation of five cases, in all of which symptoms previously ascribed to embolism of the central artery of the retina were present. This origin of the blindness, however, he disputed and concluded that, in the train of symptoms classed under the title of embolism, too much significance had been given to the stoppage of the circulation by the lodgment of a plug formed at a distance from the eye, while not enough stress had been laid on the mechanical actions regulating the supply of the blood within the eye, as well as on the condition of the walls of the vessels themselves and their contents.

I pointed out in my paper that the prognosis in these cases should always be guarded, and cited a case in which a probable thrombosis of the central artery of the retina occurred in an eye which had been the seat of some fifteen to twenty attacks of transient blindness extending over a period of eighteen months.

An observation of very great interest in connection with these cases, both from pathologic and physiologic standpoints, is one made by Leber, of a case of monocular blindness in which there were all the ophthalmic signs of embolus but in which the microscope failed later to reveal any evidence of either embolism or thrombosis. Leber attributed the blindness and the pathologic findings to long-continued spasm pure and simple. The course of this case, until the final attack came and vision was hopelessly lost, was precisely analogous to the apparently innocent group of transient blindness. It is evident, therefore, that the prognosis in all of these cases of transient blindness should be most guarded, as it would appear impossible to predict what the outcome of any one of them might be, whether the blindness be due to spasm and be always transient, whether it be due to a forming embolism which finally destroys the sight by shutting off the blood-supply entirely, or whether the same fatal result is attained as in the case reported by Leber, by long-continued spasm, without microscopic change in the vessel walls.

Dr. E. C. Ellett, Memphis: Four of the patients whose cases are reported in the paper are elderly people with gross vascular disease. Case 3 is in a young person, without vascular disease. These should, it would seem, be taken to represent different conditions, one functional, the other organic in nature. The commoner type, as indicated in the paper, is that seen in old people with arteriosclerosis, and appears under the form usually described as embolism, and about whose exact nature much uncertainty exists. It is significant that complete recovery rarely follows these attacks, as indicated by the ophthalmoscopic changes and visual disturbance which continued to be present in the cases reported. A case, the exact nature of which is not clear to me, has recently come under my notice.



Left eye, Mrs. E., March 15, 1910.

Mrs. E., aged 35, woke on the morning of Jan. 20, 1910, to find that her left eye was blind. I examined her about 8:30, and found the blood current in the arteries interrupted, there being stretches of empty vessels, then a column of blood, and then empty vessel. This affected all the arteries. There was edema of the retina, cherry spot at macula, and slight fullness of the veins. Amyl nitrite was at once administered, with deep massage and later erythrol tetranitrate and small doses of mercury. The vision began to return in twenty minutes, and gradually improved. On April 19 she saw 20/25 p, excubically, and the field was as shown on the attached chart. This patient's general condition is interesting. I have known her from childhood and she is and has always been intensely anemic. She has metrorrhagia due to fibroids, which probably explain her anemia. About a year ago her blood showed a marked grade of chlorotic anemia. At the time of this attack her blood showed 65 per cent. of hemoglobin, 5,200,000 red cells, that is to say chlorosis. She also has mitral regurgitation; hemiopia and other forms of visual obscurity are part of the picture of ophthalmic migraine and temporary obscuration, without headache is more common. I have two cases of the latter type in mind in which I can only speculate as to the cause, since I have never been able to examine either of them in an attack. At other times the vision and eye-grounds are normal.

Dr. L. Connor, Detroit: Three or four years ago I reported some observations on the use of vibratory massage on the eye. One was the following: A man, aged about 50, three months before coming under my care, began to lose his sight. He had been in the hands of one competent oculist after another and the refraction of the eye had been perfectly determined. The only abnormal condition to be found was a cord-like condition of the retinal arteries. I thought that the patient had had everything possible done for him; but I had already demonstrated by the use of the vibratory apparatus in the normal eye that I was able to reduce the size of the retinal artery. The patient's vision for distance in one eye was 12/200 and the other about 8/200. He was unable to read and was incapacitated from work. It occurred to me that what I had learned might have application here. His kidneys, liver and digestion, and every other function, so far as experts could determine, were quite normal. I passed this instrument around the sclerocorneal junction of each eye for a minute and repeated the operation, and within five minutes the patient could read 22/100 with one eye and with the other 18/200. I looked in the eye and found that the size of the arteries was perceptibly larger, and there was the increased vision. So I determined to continue the treatment. There was a progressive improvement in the vision till within a month the patient could read with his corrected glasses, which did not need any change. At the time I saw him last (three years ago) he could read 20/20 and Jager (Yeager) No. 1. He has been able to carry on his business with entire success since. This is perhaps the most marked example I have met, but there are many other cases allied to this that I have been unable to reach in any other way.

DR. W. ZENTMAYER, Philadelphia: Five years ago I presented this subject of spasm of the central artery of the retina before this section on the basis of one case which I had seen in consultation. A man had repeated attacks of transsient, monocular blindness, occurring over a period of two or three days. Only on one occasion did it affect both eyes. He had as many as ten or fifteen attacks in an hour. It is now five years since the attack and he has never had a recurrence. Some time afterward Dr. DeSchweinitz read a paper on the results of toxemia, and I thought perhaps that case was caused by toxemia. The study of the blood-pressure, at the time of the attacks, however, showed that it was normal and there was no evidence of arteriosclerosis. The interesting fact in connection with the probable cause was that the only treatment which seemed to relieve the spasm was free purgation.

DR. J. L. THOMPSON, Indianapolis: Has anyone ever found this condition in hysterical subjects? We often have it temporarily in these subjects, a day or longer.

DR. M. FEINGOLD, New Orleans: Dr. Knapp makes a correct distinction in these cases between cases based entirely on spasm and those based on thrombosis, or embolism. But I wish to recite a case in which this sharp distinction cannot be drawn. Several months ago a man of 74 called at my office. I had examined his vision and prescribed glasses a year before. He had been sitting at luncheon when he suddenly became blind in one eye. I examined him and found his vision, which was 5/30 a year ago was now 5/12, and he could read only the right end of the line. He could not see the left end. The other changes were practically *nil*, except that the disc in the left was paler than in the right eye. The arteries were distinctly visible, but possibly narrower. The veins were well filled. The eye was practically normal except for the paleness of the disc. Acting on what has been recommended by others I told the patient to go home and take a free purge and come back the next morning. This man has been long under treatment for severe arteriosclerosis. The next morning he could see 5/30, the whole line. I ordered the purgation to continue and ordered sodium iodid, and in the course of four or five days the vision returned to the normal condition, and the left disc became almost of the same color as the right. This is one of those border-line cases which we cannot distinctly define as due to thrombosis or embolism or to spasm simply; because we know thrombosis can be of such a character that it will allow a certain amount of blood to flow through. The circulation in this case was thoroughly reestablished in the course of a few days.

DR. W. REBER, Philadelphia: I take it that thrombosis can take place without evidence of gross lesion. In the class of cases in which there is no gross lesion we do not and we cannot to-day, except clinically, distinguish between spasm and thrombosis; but in those in which there is no thrombosis and in which there is transient monocular blindness, such as those described, the indications all point to toxemia. And I am firmly convinced that, as Dr. Knapp has said, transient blindness, monocular, is always a grave sign; very much graver in the presence of an altered blood-pressure; grave enough though the blood-pressure may be negative. I should be worried if I were subject to one attack of transient monocular blindness. The treatment is eliminative, as in the two cases cited. Nothing was of any avail until the patients were purged with Epsom salts and water taken by way of the intestine or by way of diaphoresis. The best possible elimination in such cases is none too good.

DR. W. HAUGHEY, Battle Creek, Mich.:—I should like to report a case I had three weeks ago. The patient is a man of 24, who when a boy was an athlete, always running. He spent some time in the South, where he acquired the habit of smoking to excess and drinking strong black coffee clear. He had a very small refractive error in both eyes, which I corrected about a year ago. Three or four months ago he came to me with a sudden partial blindness in the right eye. He had 22/100 vision. I could see the retina and found dilated vessels of the retina, which were small, and the heart action was about as irregular as any I ever heard. The patient would have missed beats and delayed beats, etc., but no particular valvular difficulty. He had steadily improved under eliminative treatment. This trouble was only in one eye and I found it was toxic from tobacco or coffee. He has discontinued them both, and with strong eliminative treatment he is improving.

DR. A. GREENWOOD, Boston: I want to add my testimony to that of Dr. Knapp that these conditions must be looked on as very grave when they occur in patients with high arterial blood-pressure. Some years ago at Atlantic City I read a paper on obstruction of the retinal arteries, and have been interested in them since. I feel very strongly that these cases must be watched with the greatest care, and that everything that can be done must be done to reduce the blood-pressure where it has been raised. It has been my experience that the blood-pressure has been raised in all cases, even in people under 40. In the present day of high living in America there is no question that we find advanced arteriosclerosis even in the younger generation, and I think this condition requires the greatest care on the part of the ophthalmologist and also on the part of the family physician.

DR. ARNOLD KNAPP, New York: As far as I remember Dr. Ole Bull mentioned this first in 1857. He mentions Raynaud's observations, so that the condition must have been familiar. None of these patients were hysterical. In fact, in hysteria the most important feature has been the normal condition of the eye-ground. The exciting cause of the spasm is an interesting question, but it is complex. I want to emphasize the importance of preventive treatment, because I think treatment after the condition has occurred is nearly always unsatisfactory.

ACUTE GONORRHEAL SALPINGITIS

HENRY B. ORTON, M.D.
EAST ORANGE, N. J.

It is the primary purpose of this paper to report a case of acute gonorrheal salpingitis cured by the injection of antigonococcic serum, but a few words regarding the ascension of gonorrheal infection in women will not, I trust be out of place. Extension to the appendages is estimated to occur in from 13 to 20 per cent. (Bunn). The ascent of infection from cervix to fundus, and fundus to the appendages, is usually favored by some contributing cause such as sexual excess (especially in close relation with the menstrual period), alcoholism; run-down system, abortion and labor, septic instruments, and continued cohabitation with an infected male. The vagina in adults is covered with thick stratified epithelium which resists the infection, making gonorrheal vaginitis a rather rare condition, although a secondary vaginitis may be caused by a virulent cervical discharge passing over the surface. I am not writing a treatise on the pathology of gonorrheal infection, however, but reporting the case from a therapeutic point of view only. I know of only a few cases in which the antigonococcic serum has been used in acute gonorrheal salpingitis, the latest case being that of Dr. Albert T. Tuttle in which he used the gonococcic vaccine. In old chronic cases, especially gonorrheal arthritis, it has been used with marked success.

Patient.—On February 28 I was called to see M. P., aged 20, white, single, who gave me the following history: On February 15 she had intercourse; five days later she experienced frequent and painful micturition, with a little burning in urethra and vulva. On February 22 the menses appeared and continued for three days; then they suddenly ceased for two days, then returned again and continued for one week. On February 26 the patient felt chilly and had severe pains in the head, left iliac fossa and over the pubic bone; with diarrhea, anorexia, nausea and vomiting.

Examination.—On March 5 I made a vaginal examination. The urethra showed a reddened and swollen mucous membrane; the meatus urinarius was red and congested and slightly everted. On pressing the urethra from the vaginal side I could express a few drops of whitish discharge; this I collected on a glass slide and examined for the gonococcus, which I found in large numbers. There was a vaginal discharge; the cervix was reddened and congested and painful to touch. Pain was present over both iliac fossæ but more on the left side; the left tube was enlarged.

Treatment and Course of Disease.—The patient was already in bed. I gave her massa hydrargyri gr. vii followed in the morning by magnesium sulphate. Ice-bag over left iliac fossa, and ordered a douche of tincture of iodin ʒi to a quart of warm water three times a day. On March 12 I injected under aseptic conditions 2 c.c. of the antigonococcic serum. The fever went up in the afternoon after the injection. Again on March 15 and 17 respectively, I injected 2 c.c. more under the same conditions. After the second injection the temperature dropped and has remained down ever since. There was not the least discomfort after any of the injections. I discharged the patient, feeling perfectly well on March 29. She has been in my office three times since for observation and has had no pain, no discharge from either uterus or urethra.

The patient became infected just prior to her menstruation, and, in view of the bacteriologic findings, I can have no doubt as to the diagnosis. She was cured by 6 c.c. of the antigonococcic serum in conjunction with warm iodin vaginal douches. We should give a patient suffering from gonorrheal salpingitis at least three months before thinking of operation. Epididymitis does not require castration. Why then should all cases of gonorrheal salpingitis call for a salpingo-oöphorectomy?

51 William Street.

A CASE OF PRIMARY MASTOID PERIOSTITIS

WILLIAM PEARCE COUES, M.D.
Surgeon to the Boston Dispensary
BOSTON

Primary mastoid periostitis is so uncommon that the report of a case is of interest. Blake and Reik[1] say:

> The diseases of the mastoid, which are the most frequent and also the most important from a surgical point of view, are the acute congestions and inflammations secondary to similar processes in the middle ear. A careful study of the few cases of reported primary mastoid inflammations on record suggests, in the light of more recent experiences in this field of clinical investigation, the suspicion that there had been previous middle ear inflammations as the inceptor of a chronic quiescent mastoid disease which was later awakened to acute manifestations, while in others the implication of the mastoid cells possibly followed a superficial periostitis on the outer mastoid surface with pus formation denudation of bone and subsequent spontaneous perforation inward.

History.—F. D., single, aged 20, was seen at the surgical clinic, Boston Dispensary, May 27, 1909. Father and mother, three sisters and one brother, living and well. Patient has had scarlet fever, whooping-cough, measles and tonsillitis. There is no family history of tuberculosis and no history of ear trouble known to patient.

Present Illness.—About one month previous to patient's visit to the dispensary a swelling was noticed posterior to the right ear; it disappeared, but returned, with redness, and with tenderness which was felt at the back of the neck also. Pain extending up to the vertex was present. There was no marked constitutional disturbance.

Examination.—This showed a slight, fairly well-nourished and well-developed girl. The teeth were good; the throat slightly reddened. There was pediculosis capitis. Nothing abnormal was found in the examination of the heart and lungs. There was a rather extensive psoriasis of long standing. Directly over the right mastoid process was a brawny, reddened, infiltrated area, the size of one-half the palm. Posteriorly there seemed to be indistinct fluctuation. The swelling was moderately tender on pressure. No marked cervical adenitis was present. The patient was sent to the aural department of the dispensary for an examination, and the report sent back that the ear was perfectly normal. The case was regarded as one of postauricular abscess, possibly of glandular origin (pediculosis).

Operation.—May 29 ether was given and a slightly curved incision made over the most tender part of the swelling, carried down quite deeply, but not to the bone; no pus found; free bleeding; gauze drain; dressing. There was some relief from pain following the incision. Next day swelling was the same; no pus; redressed with hot boric gauze and drain replaced. The patient did not do well; the cervical part of the swelling, instead of becoming smaller, increased. There was constitutional disturbance.

Second Operation.—The incision was enlarged and a deep cervical abscess opened. A rubber tube was introduced, apparently draining the abscess perfectly. There was now some improvement, but it was not satisfactory. It was noticed at the dressing that pressure on the mastoid increased the flow of pus from the cervical incision, and the patient's consent to further interference was obtained.

Third Operation.—The first part of the former incision was deepened and carried down to the mastoid process; bare bone was seen and felt, but no softened areas were detected suggesting necrosis of mastoid cells. The incision was drained and tube kept in the neck. The patient was seen at home and dressed there. From this time on convalescence was rapid, the cervical abscess drained well, gradually closed and the induration disappeared. The wound over the mastoid cleaned up quickly and covered with granulations, the drain here being soon removed. The patient was discharged well June 22.

Five months afterwards the patient's mother stated that the girl had been well, but that lately the scar had been somewhat reddened. The patient was given instructions to report at the clinic again. and reported in April, 1910. She stated that there had been no recurrence of trouble and that she was perfectly well.

The possibility of a mastoid periostitis, even though two ear examinations showed the ear perfectly normal, should have been thought of and the third operation, which cured the patient, done earlier. No specific history was obtained, but it would have been of interest to have had a Wassermann reaction done in this case.

261 Beacon Street.

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[1] Blake and Reik: Surgical Pathology and Treatment of Diseases of the Ear, 1906.

ANTITYPHOID VACCINATION

RESULT OF 1,100 INOCULATIONS

FREDERICK M. HARTSOCK, M.D.,
Major, Medical Corps, U. S. Army
FORT WAYNE, MICH.

Antityphoid vaccination by means of the injection of dead typhoid bacilli is now destined to be a practical measure of prophylaxis and of value in the handling of typhoid epidemics.

The adoption of this method of prevention by various foreign military services, as well as our own, and its increasing popularity in the protection of nurses and interns in hospitals, is but a step toward the general use of the vaccine by practitioners at large, and the laity will, I believe, not be backward in seeking this preventive once its value is known and the immediate benign results of the inoculation established.

The method of using the killed bacteria has been placed on a definite and firm basis by Wright by his inoculations in the British Army and in the Boer War.[1] Sufficient time has now elapsed to secure definite statistics on which to base an opinion as to its effect on troops over a long period of time. Wright says:

> The latest statistics are those of Leishman. These statistics cover a period of three years and a half, from the beginning of 1905 to June, 1908. In 5,473 soldiers vaccinated against the disease, 21 took it and 2 died; in 6,610 soldiers practically under the same conditions, who were not vaccinated, there were 187 cases and 26 deaths; that is, among the vaccinated soldiers there were 3.8 cases per thousand, and among the non-vaccinated 28.3 per thousand.

The above difference in the ratios should be sufficient to induce the practitioner to adopt this as a general measure.

The vaccinations, I believe, should be generally adopted for the following classes:

1. All persons between the ages of 15 and 25. Osler states that the greatest susceptibility to typhoid is between these ages.
2. All persons exposed in time of an epidemic.
3. Nurses and physicians.
4. All persons in the military service, and more particularly in time of war, when troops are enrolled and concentrated in camps.

In promulgating this vaccination as a popular measure it is necessary to convince the patient as to its immediate benign effects. The layman must be assured that there will be no detention from business and that the injection is without harm. The military commander, in time of war, when troops are being mustered in, must be convinced that his forces will be ready for duty at any time. I believe that my series of 1,100 vaccinations will give sufficient evidence to assure affirmatively both the above.

Of this series there were 1,100 inoculations in 563 persons. The ages ranged from 15 years up, but mostly those of military age—from 21 to 35 years.

The vaccine used was furnished from the laboratory of the Surgeon-General's office, U. S. Army, and to most cases two doses were administered; first inoculation, 500,000,000 bacteria; second inoculation, 1,000,000,000 bacteria, and the third inoculation, the same number. Injection by means of the ordinary hypodermic syringe was employed, and given either at the insertion of the deltoid or in the flank. The latter is the more painful and should not be employed.

The classification of reactions is that adopted by the Medical Department, U. S. Army, as follows:

> Reaction, none; mild, temperature up to 100; moderate, temperature up to 103; severe, temperature above 103.

To this I desire to add that in cases quoted as presenting no reaction all patients had a very slight local tenderness and redness at point of inoculation. In cases cited as mild the patients had slight general reaction; malaise and considerable local tenderness. In cases cited as moderate the patients had considerable general reaction; added to fever were nausea, rigor, muscular pains, headache and indisposition for about twelve hours; and in the severe local reaction causing disuse of arm for twelve hours, and all stated they were "very sick."

No untoward results were noted; all patients recovered promptly and in the severe cases the patients were able to attend to duty after twenty-four hours. A small percentage of patients had severe rigors, slight general erythema, diarrhea and vertigo, and one had epistaxis.

The figures are as follows:

TABLE 1.—REACTION IN 562 CASES

	First Dose.		Second Dose.		Third Dose.	
	No.	%	No.	%	No.	%
None	55	9.8	66	12	1	50
Mild	471	83.7	436	81	1	50
Moderate	31	5.5	29	6	..	..
Severe	6	0.1	4	1	..	..
Total	563		535		2	

In the 563 cases, 56 men stated that they had previously had typhoid fever. On these the percentage of reactions was as follows:

TABLE 2.—REACTION IN 56 CASES WITH A PREVIOUS TYPHOID

	First Dose.		Second Dose.	
	No.	%	No.	%
None	10	17.8	9	16
Mild	41	73.3	42	79
Moderate	5	8.9	3	5
Severe	None		None	
Total	56		54	

Of the 1,100 vaccinations the reactions were as follows:

None	122	or	11	per cent.
Mild	908	or	83	per cent.
Moderate	60	or	05	per cent.
Severe	10	or	.001	per cent.

From the above it may be noted that the reactions differ but little between the first and second doses and that the typhoid cases react in no way differently than the non-infected.

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[1] Wright: Progressive Medicine, March, 1910.

INTEGUMENT ATROPHY: A SIGN OF DIAGNOSTIC IMPORTANCE IN EARLY PULMONARY TUBERCULOSIS

PRELIMINARY REPORT

CLARENCE L. WHEATON, M.D.
Physician with Chicago Tuberculosis Institute and Central Free Dispensary, Rush Medical College
CHICAGO

Attention is called to a new sign which I believe to be of considerable diagnostic value in the examination of those afflicted with pulmonary tuberculosis. In a considerable number of tuberculous patients examined at the Rush Medical College it was observed that the integument or skin when picked or pulled away from the fascia was, over certain areas freely movable and not adherent to the muscle fascia. This phenomena was especially noticeable in cases of early unilateral involvement, and subsequent exa[illegible] showed the tuberculous process to be on the [illegible] we could elicit the sign. Now if there is bilateral involvement the sign can be demonstrated on both sides but will be more pronounced over the original area of infiltration.

METHOD OF ELICITING THE SIGN

The patient with hands resting in the lap faces the physician, looking straight to the front. The integument is then pinched between the thumb and index-finger and pulled away from the muscle fascia. It will be observed that over the area of infiltration the integument can be drawn from the chest wall with ease as compared with the side where there is healthy lung, and if now rolled between the fingers it will feel in consistency much thinner than a fold of skin taken from the sound side.

This condition or change in the integument of the chest wall has been observed in very early cases of tuberculous infiltration with little disentegration of the lung in both adults and children. Whether this is a true atrophy of the skin or due to muscle or nerve degeneration, or in some measure dependent on immobility of the chest wall I am at this time unable to say. It is suggested that this sign be sought as the first step in the examination of the patient, and the lesion within the lung then demonstrated by the usual methods. The value of the sign is in the fact that this atrophic change occurs early, and before there is extensive disintegration of the lung. Numerous colleagues having confirmed my findings, I now present this preliminary report, trusting that my observations may be found correct by others, and this contribution prove an aid in the early diagnosis of pulmonary tuberculosis.

2738 Pine Grove Avenue.

INJECTION OF PARAFFIN INTO THE APPENDIX IN AN ATTEMPT TO CURE INDIRECT INGUINAL HERNIA

REPORT OF A CASE

A. C. STOKES, M.D.
OMAHA, NEB.

History.—Mr. V. was referred to me by Dr. Miller of Gibbon, Neb., Jan. 19, 1909. He was of German birth and a farmer by occupation. The family and personal history were negative, except that the patient had suffered with an indirect inguinal hernia for a few years. About ten days previous to visiting us he consulted an irregular practitioner in Omaha for his hernia. This physician agreed to cure him, without operating, by an injection method. The patient underwent the injection on Saturday and returned to his home, about 120 miles away, the same day. On Monday he was taken with severe pains in his right side, which were diagnosed by his home physician as due to appendicitis. He was referred to us for operation.

Examination.—The attack did not seem to be typical appendicitis and we kept him under observation for about two days before operating. He was running a temperature of about 99 to 100 F., no increase in pulse, slight rigidity over the right rectus, no gastric symptoms, and in fact no other symptoms which could be located. The blood-count was 7,200 whites, 4,200,000 reds, no polynuclear increase, and no signs of infection; but the pain and soreness continued. We therefore decided to operate.

Operation and Course.—We made the usual incision over the rectus muscle, found the appendix considerably inflamed, very hard, and the hardness extending over the cecum. We removed the appendix and cecal base of the appendix, suspecting that it was cancerous. On examination of the part removed it seemed to be filled with a hard waxlike substance. Microscopic examination showed the material to be paraffin. The presence of the paraffin in the appendix had caused the pain. The man made an absolutely uninterrupted recovery, and our pathologist, Dr. Wooley, now of Cincinnati, reported the appendix to be free from carcinomatous infiltration. The patient is still absolutely well after nearly a year and a half.

We could not tell exactly where the paraffin entered the appendix, whether immediately into its lumen, or, probably, beneath the serous covering.

In injecting the hernia the physician probably passed the needle below the canal into the appendix, or into the cecum about the appendix, and infiltrated this area.

It seems such an uncommon and unexpected occurrence that it is worth reporting.

Brandeis Building.

ALUM BATHS IN TYPHOID FEVER

A PROPHYLACTIC AGAINST SKIN INFECTION

THOMAS R. BOGGS, M.D.
Resident Physician, The Johns Hopkins Hospital
BALTIMORE

Various forms of skin infection have been commonly associated with typhoid fever from the first recognition of the disease. In the older studies a very large proportion of all patients had boils, bed-sores or abscesses during the later weeks or in convalescence. With the advance in nursing methods and general hygiene in the past quarter century, the incidence of these complications has been greatly reduced, but there is still a rather constant percentage of skin infection in the very best hospitals where especial attention is given to the care of the skin. That is, in spite of alcohol rubs, frequent turning, and changing bed-linen, with liberal use of dusting powders, we still have more furunculosis and decubital sores than we should.

This constant appearance of skin complications has been attributed in part to the wide prevalence of the Brand treatment of bathing the patients in tubs. It is true that such bathing at frequent intervals (every three or four hours during the fastigium of the disease) does tend to soften the skin and render it less resistant. Again, the patients frequently void infected urine or feces in the tub during the bath, thus increasing the bacterial flora of the skin. Furthermore, the constant rubbing of the skin during the bath, which is essential to the best therapeutic results, leads to a certain amount of irritation, particularly about the hair follicles, and marked in proportion to the hairiness of the skin.

In the large typhoid experience in this hospital we have sought, in every way possible, to minimize the skin infection by the most scrupulous care, the skin of each patient being examined daily. In addition to the general measures for keeping the skin dry and smooth, we have covered the long rubber gloves worn by the nurse with a mitt of toweling in order to prevent the pulling of the body hairs by the wet rubber. Nevertheless, we have had, during the last ten years, a fairly constant percentage of skin infections, counting all furuncles, abscesses, folliculitis, dermatitis, and bed-sores.

It occurred to me that something might be accomplished by the use of antiseptics in the bath-water or some further means might be taken to increase the resistance of the skin. For this purpose a non-irritating and non-poisonous material must be chosen and one not too expensive. After some investigation, commercial alum (potassium aluminum sulphate) was selected. This substance is readily soluble, has fairly strong antiseptic properties (see Sternberg's tables) and, as is well known, tends to precipitate organic matter in water. In addition to these, it exerts some tanning, or hardening, influence on the skin—and, lastly, it is cheap.

For two years we have used it as a routine in our wards and, as the results seem encouraging, it is brought to the attention of the profession in the hope it may prove generally useful.

The procedure is very simple and is carried out as follows: One pound (500 gm.) of powdered alum is quickly dissolved in a little hot water and added to the tub during the filling. With the average tub of 450 to 500 liters, this makes approximately a 1 to 1000 solution. The alum is sent to the ward from the pharmacy in pound packages, so that the time for preparing the bath is not appreciably lengthened. The cost is about 4 cents per bath.

The patient is bathed in the alum solution just as in ordinary water and experiences no inconvenience from the presence of the drug. The only noteworthy changes in the skin are a slight increase in desquamation during convalescence and a decided diminution in the incidence of skin complications of all sorts (amounting to 50 per cent.) as shown by the tables appended. In these cases the care of the skin is the same in all except for the alum baths. It is not suggested that the alum baths can replace the rigid care of the skin in the ordinary way, but that with them the frequency of skin complications may be still further reduced.

RESULTS OF ALUM BATHS IN PREVENTING SKIN INFECTIONS IN TYPHOID

Cases Treated.	Abscesses.	Furunculosis.	Bed Sores.	Dermatitis.	Folliculitis.	Total Skin Infections.	Percentage.
September, 1905 to September, 1908, without Alum							
394	8	13	9	2	0	32	8.1
September, 1908 to November, 1909, with Alum Baths							
210	4	3*	0	1	1	9	4.2

* Six cases are excluded in which patients received only sponge baths without alum.

Therapeutics

DIET IN GOUT

The relationship of gout to uric acid and uric acid to gout is of perennial interest and furnishes a subject for continued discussion. An increase of uric acid in the blood or uric acid derivatives in the blood during gout is generally understood to be a fact. Consequently, any diet that will diminish the amount of this substance in the blood should be of benefit in this disease.

Schittenhelm (*Therap. Monatshefte,* 1910, xxiv, 3, 113) believes that the first point of attack in the rational treatment of gout is the uric acid circulating in the blood, *i. e.,* the uricemia. He believes that just as it is necessary in diabetes to keep the patient on a non-sugar yielding diet for several months or even years, it is necessary to prevent a gouty patient from eating purin-yielding food. Schittenhelm believes that by prolonged care in the diet most cases of uricemia not complicated by diseased kidneys can be cured. Of course it should be remembered that some of the uric acid in the blood comes from the breaking down, within the body, of white blood cells and other nuclein containing tissues, but the purin-free diet must reduce the uric acid salts in the blood.

Meats and flesh of all kinds, even fish, contain purin bases, and to prevent uric acid from being formed from the diet, flesh of all kinds must be prohibited. It has long been known that foods that are rich in purins, such as liver, pancreas, thymus, brain, or other sweetbread titbits, shad roe or the roe of other fish, should be excluded from the diet of a gouty patient. It has now for several years been known that alcohol in any form taken with an ordinary meat meal would increase, probably by its action on the liver, the formation of uric acid. Consequently, alcohol in any form should not be allowed to patients with a meal which contains meat, even if alcohol is allowed between meals, or with other foods.

It has also been a question of discussion as to the fate in the body of methylpurins ingested with tea and coffee. The purin derivatives in these beverages are caffein, theobromin and theophyllin. Besser (*Die Therapie der Gegenwart,* 1909, l, 321) has recently published the results of investigations by him on the metabolism of these methylpurins in which he finds that the uric acid excretion by normal man is slightly increased after the administration of tea or of coffee.

These findings by Besser are contrary to the results of investigations by many others, they claiming that a part of these methylpurins are demethylated in the body with the production of monomethylxanthin. On account of these contradictory findings in regard to an increase of uric acid from tea and coffee, Schittenhelm made investigations both chemically and physiologically which seemed to prove that demethylation of these methylpurins was perhaps impossible, and secondly, that in dogs uric acid was increased by the administration of caffein and theobromin.

From these experiments it therefore would seem, that an increase of uric-acid combinations, and perhaps its progenitors, in the blood is an aggravator of gout, and that tea and coffee should be excluded from the dietary of gouty patients.

International Hospital in Turkey.—An international hospital has been opened in Adana, Turkey, such an institution being the most pressing need after the massacre which entailed a great deal of sickness and suffering. The city has a permanent population of nearly 70,000, and this is the only hospital in the district, except one for the Turkish soldiers. Major Doughty-Wylie, the British consul, says: "Nothing in the way of charitable effort has been done in this country more worthy of generous support, nothing more acceptable to all races and creeds." There will always be private wards and special care for Americans and other foreigners. There are often cases of serious illness among tourists, or among foreign workmen sent out to set up new machinery, and the only accommodations for such patients are in the private homes of missionaries. A leading German firm, which has several of its own men in Adana, is actively interested in the hospital. The nurses are mainly British. The American Board, which has been at work in Turkey for more than half a century, will be responsible for outfit and traveling expenses if the right man can be found to be at the head of this important work, and an American woman has pledged one-quarter of such a man's salary for two years. If Adana were in the condition that it was before the massacre there would be a good revenue from fees, but the present desolation makes this source of income small.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 25, 1910

[The large amount of space occupied by the index this week makes it necessary to omit some departments and to curtail others.]

THE INDEX

One of the important "features" of The Journal is the Index accompanying each semi-annual volume, which appears in this issue. By degrees the importance and great practical value of this index to those who desire to look up medical literature is being realized more fully; yet we fear that even now comparatively few of our readers appreciate its full value.

The work connected with preparing this index, from both the literary and the mechanical viewpoints, is enormous. We emphasize again the fact that this index is not only an index of the matter that appears in The Journal, and in that respect possibly no better than similar indexes in other weekly journals, but also an index to practically all the original articles published in the leading domestic and foreign medical journals during the preceding half year. It is, in fact, an index of the world's most important medical literature. To make it of value the articles are indexed not only under their titles, but also by cross-references to subjects.

In our Department of Current Medical Literature are listed more than 100 domestic journals, and nearly as many foreign. This includes 24 weeklies, 10 biweeklies, over 100 monthlies, 15 bimonthlies, 16 quarterlies and over a dozen periodicals published at irregular intervals. The special value of the index comes from the fact that it is up to date, so that, while it does not compare in detail with the *Index Medicus* or with the Index of the Surgeon-General's Library, it has the very great advantage of containing references to current literature.

To increase its usefulness and to make it easy of reference, the index is also published in pamphlet form, with the titles given. The advantage of this pamphlet, the "Guide to Current Medical Literature,"* is that references can be looked up without handling the large bound volumes or many single numbers.

FOURTH-OF-JULY INJURIES AND PROPHYLAXIS

For seven years The Journal has been collecting statistics regarding deaths and injuries resulting from the celebration of the Fourth of July. These statistics are based on definite information obtained from reliable sources. From these, tabulations were made and published in such form as to be clearly understood by the public, as well as by the medical profession. For three or four years little attention was given to this matter by the press, and, consequently, it seemed as though the labor was in vain. Reprints of these tabulated statistics were made and their distribution was gradually made wider, so as to include not only the leading newspapers, but officials connected with most of the municipal governments. At first only the Chicago newspapers, especially the *Tribune,* made mention of the report, but during the last year or two these reports have been utilized in articles and editorials not only by the leading newspapers, but by all classes of magazines. Finally the public has become thoroughly aroused. A strong public sentiment has been created in opposition to the former inhuman methods of celebration, and in their place are being substituted pageants, parades, flag drills, picnics, and the like. Probably no single work undertaken by The Journal has resulted in so much direct good to the public as has this annual presentation of Fourth-of-July casualties. In the collection of the data each year, we have had the cooperation of an increasing number of physicians, and we hope that this cooperation will be still more extensive this year. We trust that every physician who has a case of Fourth-of-July injury will report it to us. All we want is a brief mention of the actual injury, the immediate cause and the result; we desire particularly to know the kind of cartridge or fireworks used. May we again take the opportunity of urging on physicians the importance of prompt and thorough treatment of these injuries, especially so that the harmful results of lockjaw may be avoided? We offer the following simple rules to be followed in the treatment of every blank-cartridge or puncture wound:

TO PREVENT LOCKJAW

1. Inject subcutaneously 1,500 units of antitetanic serum and continue the injections if indications of possible tetanus arise.
2. Freely incise every wound.
3. Carefully and thoroughly remove from the wound every particle of foreign matter.
4. Cauterize the wound thoroughly with a 25 per cent. solution of phenol (carbolic acid) in glycerin or alcohol.
5. Apply a loose, wet boric acid pack.
6. In no case should the wound be closed. It should be allowed to heal by granulation. The dressing and packing should be removed every day, and fresh dressings applied.

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* See advertising page 2

Medical News

CALIFORNIA

Commencement Exercises.—The commencement exercises of the Los Angeles Department of the College of Medicine of the University of California were held June 2, when a class of nine received degrees.——The fourteenth annual commencement exercises of the College of Physicians and Surgeons, San Francisco, were held May 19. The degree of doctor of medicine was conferred on a class of seven, and Dr. George Childs McDonald delivered the valedictory address, and the address to the graduates was made by Alden Anderson.

Testimonials to Professors.—A testimonal dinner was given in Los Angeles, June 2, in honor of Drs. Joseph Kurtz and George W. Lasher, who, after twenty-five years' service, are about to retire from the faculty of the Los Angeles Department of the College of Medicine of the University of California. A solid gold watch fob was presented to each from the faculty, alumni and students, by Dr. Edmond M. Lazard. Each of the guests was presented by Dr. John C. Ferbert with a handsome engraved set of resolutions, signed by each of the two hundred practitioners present.

Personal.—Dr. John E. Rodley, Chico, was thrown from his automobile, June 3, and seriously cut and bruised.——Dr. W. F. Lynch, Oakland, was stricken with paralysis in his office, May 21.——Dr. Charles A. Dukes, Oakland, has undertaken the duties of surgeon-general of California during the absence of Surgeon-General Winslow Anderson in Europe.——Dr. John C. King, Banning, who has been critically ill, is reported to be improving.——Dr. Clarence D. Dickey, San Bernardino, suffered a cerebral hemorrhage, May 8, while visiting in Los Angeles.——Dr. David B. Fields, Weaverville, has been reappointed physician of Trinity County.

COLORADO

Dinner for Medical Men.—Dr. Kate Lindsay, Boulder, president of the Colorado Woman's State Medical Society, entertained eighteen members of the organization at a dinner at the Boulder Sanatorium, June 1.

Personal.—Dr. Lewis Lemen and family and Dr. Seymour D. Van Meter, Denver, are in Europe.——Dr. Laura L. Liebhardt, Denver, has started for the other side.—Dr. William T. H. Baker, Pueblo, has resigned as assistant chief surgeon of the Colorado Fuel and Iron Company and will practice in Pueblo.——Dr. L. J. Beebee, Georgetown, has been made surgeon for the Colorado Southern Railway for the Georgetown District.——Dr. Addison C. McCain, Ault, is reported to be critically ill at St. Luke's Hospital, Denver, with appendicitis.——Dr. William A. Packard, Lamar, is suffering from a Colles' fracture, received while cranking his automobile.

ILLINOIS

Personal.—Dr. George A. Dicus, Streator, was operated on June 9, for appendicitis.——Dr. Vaclav H. Podstata, former superintendent of the Elgin State Hospital, has returned from a European trip.——Dr. Robert J. Burns, Freeport, has been appointed county physician.——Dr. Ralph M. Carter, Chicago, has been appointed on the medical staff of the Hinton Hospital, Hinton, W. Va.——Dr. John R. Sutter, Jr., Edwardsville, has been appointed county physician.——Dr. Daniel F. Duggan, Alton, has been appointed township physician.

Chicago

Alumnae Meet.—The Alumnae Association of the Northwestern University Woman's Medical School held its annual meeting, June 14. The following officers were elected: President, Dr. Eliza H. Root; vice-presidents, Drs. Annette S. Mack and Nora Soule Davenport; secretary, Dr. Anna Ross Lapham; treasurer, Dr. Mary C. Hollister, and trustees, Drs. Rachel Hickey Carr, Rose Willard, and Louise Acres.

Rush Class Reunion.—The class of 1899 of Rush Medical College held its annual reunion and dinner at the Bismarck Garden on the night of June 16. Covers were laid for fifteen. The following officers were elected for the ensuing year: President, Dr. William D. Byrne, Chicago; vice-president, Dr. Thomas R. Thomas, Lima, Ohio; secretary-treasurer, Dr. John B. Ellis, Chicago; and historian, Dr. Benjamin H. Breakstone, Chicago.

Program for Fourth of July.—To give organized expression to the growing public sentiment in favor of a "safe and sane Fourth of July," to aid in the enforcement of all laws designed to prevent the disorder accidents and fires attending the celebration of Independence Day, and to endeavor to secure such type of celebration as shall promote true patriotism, the Chicago Sane Fourth Association has arranged for a patriotic celebration of that day in the form of a parade and a military tournament under the direction of the Commanding General of the Department of the Lakes of the United States Army. The parade will be a grand pageant in three divisions, the first representing the United States of America, with various emblematic floats and five thousand United States troops representing all branches of the service, the second representing the state of Illinois, with the governor and the military organizations representing various wars of the republic, followed by floats and representations of historic events, and the third division representing Chicago, with the mayor, his cabinet and the city council, together with floats and paraphernalia representing the history and progress of the city, labor unions and other organizations, and a parade of the different nationalities represented in the city. The military display by the United States troops is a part of a great military tournament beginning on the Fourth of July and lasting ten days, in which there will be exhibitions displaying every phase of the soldier's life and duties, with sham battles, cavalry charges, and all the movements, evolutions and methods employed in training the soldiers for actual war. A great arena with seats for thousands is now being constructed and many troops are now preparing Grant Park for the great spectacle. This year's celebration promises to be a great beginning of the new way of celebrating Independence Day and will be an example to be followed by this and other cities in future.

KANSAS

Personal.—Dr. Charles M. Fullenwider, El Dorado, has returned from Europe.——Dr. Herbert G. Atkins, Kansas City, Mo., formerly intern in the German Hospital, has located in Pratt.

Commencement.—The twentieth anniversary of the Kansas Medical College, Medical Department of Washburn College, was celebrated June 3. Dr. Elmore S. Pettyjohn, Topeka, and Dr. John B. Tower, dean of the medical school, delivered addresses, and a class of fourteen received diplomas.

MARYLAND

State Health Board Appointments.—The State Board of Health, June 16, appointed the following officers under the new law: Dr. W. Franklin Hines, head of department of vital statistics; Dr. Wm. Royal Stokes, head of bacteriologic department; Dr. Caleb W. G. Rohrer, assistant chief of bureau of communicable diseases.——Dr. Charles Caspari, commissioner of pure food and drugs, assumed his duties on the same date.——The State Pharmaceutical Association has taken action to have a pharmacist on the State Board of Health. At present the board consists of five physicians, one engineer and the attorney-general. The Association thinks it more equitable that there should be four physicians and one pharmacist.

Baltimore

Personal.—Dr. Wm. Benjamin Dudley and Dr. Thomas R. Brown sailed for a tour of Europe.

Fellowships Conferred.—Johns Hopkins University has conferred the fellowship in pathology on Henry G. Barbour of Hartford, Conn., and the fellowship in psychology on John L. Ulrich, Baltimore.

Prominent Physician Injured.—Dr. George W. Dobbin, professor of obstetrics at the College of Physicans and Surgeons, was severely injured in an automobile collision on Thursday, June 2. He was taken to Mercy (city) Hospital where he was found to have a fractured skull and collar bone.

Johns Hopkins Commencement.—There were 64 medical graduates at the Johns Hopkins University thirty-fourth annual commencement June 14. Count Johann Heinrich von Bernsdorff, German Ambassdor to the United States, was the orator, his subject being: "The Development of the German Empire." Mr. Charles Chauncey Winsor Judd received the Lister prize of $150 for the best essay on "The Life and Work of Lister." Mr. Norman Harris Williams received the Joseph Kernochan Garr scholarship ($100) medical.

Reorganization of Supervisors of City Charities.—Dr. J. Hall Pleasants, president of the Board of Supervisors of City Charities, advocates the reorganization of medical supervision at the city hospital, Bayview. He proposes, independently of the medical schools, to get the best men for the positions. At present there is no right of selection. The Board of Estimates has endorsed Dr. Pleasants' proposition and authorized a change, to become effective on the completion of the new hospital. After January 1, the medical staff of the city hospital will consist of physician-in-chief, surgeon-in-chief, physician-in-charge of the tuberculosis hospital, physician in charge of the insane hospital, pathologist, and necessary associates and resident house officers. The five chief physicians, together with the superintendent of Bayview, will constitute the medical board of the city hospital, which is responsible to the city through the Board of Supervisors of City Charities. The medical board will be responsible for the discipline of the medical house officers, and each year will nominate the requisite number of candidates for appointments, to be selected after competition, to which graduates of any recognized medical school are eligible.

Hospital Changes.—Dr. Charles Bagley, Jr., superintendent of the Hebrew Hospital for the last four years, has resigned that position and will enter on private practice in Baltimore. He has been succeeded by Dr. Grover C. Ney, who has been the assistant physician for the last two years.——The Woman's Medical College of Baltimore, which closed its doors with the twenty-eighth annual commencement, held May 30, was founded with the hope that it would enlist the interest of many persons of means in this community who were interested in the professional education of women and would contribute to its endowment. They were destined to disappointment and the failure to secure endowment is responsible for the closing of the college. There was a movement here of Miss Garrett and her friends that promised well at one time, but it veered off to the Hopkins and was thus lost. This college was the first in Maryland to adopt preliminary and written examinations, a lengthened term, a three-year course, laboratory instruction, etc. Its standards were higher than most of the colleges in the country and it did a good work notwithstanding its small means. It was one of the founders and most ardent advocates of the American Medical College Association. It has had 116 graduates, of whom 30 have married and 90 per cent. are still in active practice. The remaining students will go next year to the Philadelphia school. The graduates of 1910 will mostly enter hospitals in the same city.——At the Baltimore Medical College the following changes are announced: Dr. Tilghman B. Marders becomes professor of biology, Dr. H. R. Kreider professor of chemistry, Dr. H. Raymond Spencer demonstrator of physiology, Dr. Reginald D. West demonstrator of anatomy. Dr. Edward L. Whitney has been reelected to the chair of physiological chemistry and pharmacology. The new members of the staff of the Maryland General Hospital, attached to the college, are: Drs. H. H. Cornforth, W. T. LaFortune, E. L. Bransford, H. F. Smith, J. J. Koarsak, D. Shack, P. Showalter and W. I. Neller.

MASSACHUSETTS

Grenfel Sails North.—Dr. W. L. Grenfel sailed from Boston, May 26, with a cargo of supplies for the north, including furniture for the new hospital in Labrador.

Catholic Physicians Found Guild.—About one hundred physicians met at the call of the archbishop in the conference room of the Cathedral of the Holy Cross, May 14, and organized St. Luke's Guild. The object of the guild is to oppose paganism of the times, combat the arrogant claims of physical scientists and schools of materialism, idealism and Eddyism.

Graduates.—At the thirty-first annual commencement exercises of the College of Physicians and Surgeons, Boston, June 1, a class of thirty-three was graduated. Addresses were delivered by Drs. John H. Kellogg, Battle Creek, Mich., on "The Possibilities of Preventive Medicine," and by Rev. J. H. Crooker on "The Doctor's Outlook on Life." The degrees were conferred by Hon. Joseph Bennett, president of the college.

Tuberculosis Board.—The governor has appointed the following members of a commission to investigate and report on the care of tuberculosis patients by state and local authorities: Dr. Henry P. Walcott, Cambridge, chairman; Dr. Julian A. Mead, Watertown, and Charles H. Porter, Quincy, from the State Board of Health; A. C. Ratshesky and Ada Eliot, Sheffield, from the State Board of Charities, and Dr. Arthur T. Cabot, Boston, and George A. Dunn, Gardner, from the commission on consumptive hospitals.

Personal.—Dr. Samuel Crowell, Boston, has been appointed a member of the Valley Forge Memorial Commission.——The house of Dr. George E. MacArthur, Ipswich, was damaged by fire to the extent of $2500, June 6.——Ward physicians of Lawrence have been reelected by the overseers of the poor with the exception of Dr. Patrick J. Hughes, who succeeded Dr. Emile E. Cyr for ward six.——Dr. Frank A. Woods, Holyoke, has been appointed a member of the Board of Pension Examiners for Hampden and Hampshire county, Vice Dr. Arthur B. Wetherell, resigned.——Dr. Joseph O. Beauchamp, Chicopee Falls, has been appointed a member of the license commission.——*Jerôme B. Greene, secretary of the Harvard* College Corporation, has resigned to accept the appointment of business manager of the Rockefeller Institute for Medical Research in New York City.——Dr. Harvey W. Cushing, formerly of Baltimore, has been appointed [illegible] the Peter Bent Brigham Hospital, Bostor [illegible] A. Christian, Boston, physician-in-chief.—Dr. Walter R. Brinckerhoff, who five years ago accepted a government appointment to make a bacteriologic study of leprosy at the lepper settlement in Molokai, H. I., has returned to the United States and has accepted a position as assistant professor of pathology in Harvard Medical School.

District Societies Meet.—The annual meeting of Worcester District Medical Society was held at Quinsigamond, May 11, and the following officers were elected: President, Dr. Albert C. Getchell, Worcester; vice-president, Dr. Charles A. Church, Millbury; secretary, Dr. Roy J. Ward, Worcester; treasurer, Dr. George O. Ward, Worcester; orator, Dr. John T. Duggan, Worcester; councilors, Drs. George E. Francis, Oliver H. Everett, Samuel B. Woodward, John T. Duggan, David Harrower, Homer Gage, Ray W. Greene, and Lemuel F. Woodward, Worcester; Edwin B. Harvey, Westboro; Ephraim W. Norwood, Spencer; Walter P. Bowers, Clinton, and Dr. William G. Reed, Southbridge; nominating councilor, Dr. Samuel B. Woodward, Worcester; censors, Drs. Ray W. Greene, Royal E. Watkins, and William J. Delehanty, Worcester, and Dr. Albert G. Hurd, Millbury, and Dr. James J. Goodwin, Clinton.——The one hundred and fifth annual meeting of Essex South District Medical Society was held in Salem, May 17, and the following officers elected: President, Dr. George H. Gray, Lynn; vice-president, Dr. George A. Stickney, Beverly; secretary, Dr. Walter G. Phippen, Salem; treasurer, Dr. George Z. Goodell, Salem; librarian, Dr. Carolus M. Cobb, Lynn, and councilors, Drs. Horace K. Foster, Peabody; Harry C. Boutelle, Danvers; Ralph E. Bicknell, Swampscott; Herbert J. Hall, Marblehead; Alfred T. Hawes, Lynn; William E. Tucker, Ipswich; Philip P. Moore, Gloucester; Edwin D. Towle, Salem; Augustine M. Tupper, Rockport, and John J. Hickey, Peabody; nominating councilor, Dr. Herbert J. Hall, Marblehead; alternate, Dr. Alfred T. Hawes, Lynn, and censors, Dr. Ara N. Sargent (supervisor) Salem, and Drs. Harry E. Sears, Beverly; George C. Parcher, Saugus; Philip P. Moore, Gloucester, and Frederick W. Baldwin, Danvers.——Hampshire District Medical Society met in Springfield, May 12, and elected the following officers: President, Dr. Bennis M. Ryan, Ware; vice-president, Dr. Nelson C. Haskell, Amherst; secretary, Dr. Arthur G. Minshall, Northampton; treasurer, Dr. Justus G. Hanson, Northampton; librarian, Dr. Frances L. Burnett, Northampton; censor, Dr. John S. Hitchcock, Northampton, and councilors, Drs. Frank H. Smith, Hadley; John S. Hitchcock, Northampton, and Edward D. Williams, East Hampton.

MISSISSIPPI

Degrees Conferred.—The first annual commencement exercises of the Medical Department of the University of Mississippi, Vicksburg, were held May 20. Dr. Hugh H. Haralson presided in the absence of the dean. The commencement address was delivered by Rev. William Mercer Green, and degrees were conferred on a class of four by Chancellor A. A. Kincannon of the university.

Society Meetings.—Clarksdale and Six Counties Medical Society, at its annual meeting in Clarksdale, elected the following officers: President, Dr. Robert L. Mercer, Shelby; secretary, Dr. Lewis E. Pierce, Stovall; and treasurer, Dr. Luther D. Harrison, Clarksdale.——Physicians representing Lowndes, Clay and Oktibbeha counties met in Columbus recently and discussed the organization of a tri-county medical society. Dr. Walter R. McKinley, Columbus, presided.

NEW YORK

Improvements at Columbus Hospital.—At the second anniversary of Columbus Hospital, Buffalo, Dr. Charles R. Borzilleri announced that plans were being prepared for the enlargement of the hospital to twice its present size. He also announced the following staff of the hospital: Consulting staff, internal medicine, Dr. Henry C. Buswell; surgery, Dr. Marshall Clinton; gynecology, Dr. Earl P. Lothrop; nose and throat, Drs. Max Keiser and James J. Mooney; nervous diseases, Dr. James W. Putman; ophthalmology, Dr. F. Park Lewis; orthopedics, Dr. Bernard Bartow; obstetrician, Dr. Peter W. Van Peyma; genito-urinary disease, Dr. Nelson W. Wilson; pediatrics, Dr. Irving M. Snow; dermatology, Dr. Grover W. Wende; pathology, Dr. Norman K. MacLeod, and radiographer, Dr. Alfred W. Bayliss. Attending staff: Internal medicine, Drs. Thomas J. Walsh, Horace LoGrasso and A. J. Getola; surgery and gynecology, Drs. Charles R. Borzilleri, Charles Battaglia and Edward E. Haley; nose and throat, Dr. Gianfrancisco; nervous diseases, Dr. F. Strozzi; orthopedics, Dr. Prescott LeBreton; obstetrics, Dr. L. Franklin Anderson; genito-urinary, Dr. Joseph J. Giambrone; pediatrics, Drs. John A. Ragone and Jacob W. Bayliss; dermatology, Dr. Grover W. Wende; pathology, Dr. Frank A. Valanti; anesthetist, Dr. L. Franklin Anderson; dental surgery, Dr. J. Panzica.

New York City

Personals.—Dr. and Mrs. Hermann M. Biggs, Dr. Edward B. Dench, Dr. C. Stafford McLean, Dr. H. Holbrook Curtis, Dr. and Mrs. Dwight W. Hunter, New York, have sailed for Europe.——Dr. and Mrs. Lucien L. Brainard, Little Falls, and Dr. and Mrs. William P. Faust, Schnectady, have also sailed. Dr. and Mrs. Richard Van Santvoord, New York, sailed on Saturday, June 18.

Fordham University to Build.—At the commencement exercises of Fordham University, Dr. James J. Walsh, dean of the medical faculty, announced that a new building for the medical department would be erected and ready for occupancy by next fall. The new building will be on the university grounds facing Pelham avenue. It is also planned to conduct a free clinic at the hospital. In the fall new schools of dentistry and pharmacy will be begun. Six students received the degree of M.D.

Commencement Exercises.—At the fifty-first annual commencement of the Long Island College Hospital, Brooklyn, June 1, a class of 68 was graduated. Dr. Joseph H. Raymond presented the candidates for graduation. Dr. John D. Rushmore, dean of the college, administered the Hippocratic oath, and Dr. John A. McCorkle presented the diplomas to the class. The twelfth annual commencement exercises of Cornell University Medical College were held at the college on Twenty-eighth Street and First Avenue, June 15.

Cornell University Confers Degrees.—The Cornell University Medical College graduated 68 students, seven of whom were women. President Jacob Gould Schurman addressed the graduating class on "Progress in Medical Education." He deplored the condition of medical education in the United States and emphasized the necessity of having hospitals under control of medical colleges. The best way to establish medical colleges and medical research on a higher plane was for the best hospitals to offer positions on their staffs to the professors in the best medical schools.

Society Opposes Losing Funds.—The Medical Society of the County of New York has issued a circular to its members urging each to write at once to the governor and mayor expressing his opposition to the bill which changes the existing medical law by adding at the end of the section, "Provided, however, that in the City of New York no fines shall be paid to any such societies, but shall belong to the said City of New York." Under the existing statute the medical society of the county receives the fines imposed on violators of the medical law whenever such violators are successfully prosecuted by the medical society.

Children's Hospital Alumni Organized.—At a meeting held May 26, the Association of the Alumni of St. John's Guild Hospitals for Children was organized with the object of maintenance of interest in the work of the hospitals in the guild, the consideration and discussion of matters pertaining to hygiene and diseases of infants and children, and for the promotion of friendly relations. The following officers were elected: President, Dr. Medwin Leale; vice-president, Dr. Russell Bayly; secretary, Dr. Carlisle S. Boyd; treasurer, Dr. William Ten Eyck Elmendorf; executive committee, the officers and Drs. W. Morgan Hartshorn, Harry D. Johnson and Phillip Smith.

OHIO

A Test of the Vital Statistics Law.—Dr. J. J. Boone, a physician residing in Hardin county, after repeated violations of the vital statistics law in refusing to report births, was convicted in the common pleas court of that county. It is stated that, in taking the case up to the supreme court of the state, he solicited financial aid from a number of county societies belonging to the state organization, and received such aid from one or two. The House of Delegates of the Ohio State Medical Society, at its meeting in May, passed a resolution to the effect that no component society of the state organization could consistently give aid in the defense of any member violating the provisions of the vital statistics law of the state.

PENNSYLVANIA

Franklin County's Roster.—The Quarterly Call and Roster of the Franklin County Medical Society will be enlarged. It is one of the many manifestations of activities shown by the various county medical societies throughout the state, in the contest for medical organization for the material betterment of practitioners.

Philadelphia

Organized Labor and Tuberculosis.—At a meeting held at the Central Labor Union's headquarters, J. Byron Deacon, executive secretary of the Pennsylvania Society for the Prevention of Tuberculosis, asserted that the society was prepared to offer organized labor the use of 100 beds for tuberculosis patients, at a cost per capita of 20 cents per year. The society would do this until such time as organized labor could erect its own sanatorium. This offer was made following the report of a committee of eleven, appointed by the union at a previous meeting, for the purpose of cooperating with the Pennsylvania Society.

University of Pennsylvania Commencement.—The one hundred and fifty-fourth annual commencement was held at the Academy of Music on June 15. Secretary of State Philander C. Knox, delivered the annual address, taking for his subject, "The Spirit and Purpose of American Diplomacy." A sum of $10,000 has been raised by the four classes of the university to defray the cost of the erection of a life size bronze statue of Provost Charles C. Harrison. The statue will be placed at Thirty-sixth and Locust streets. The standard flag of the college, which is red and blue, was modified by the addition of the seal of William Penn in the center.

Personal.—Surgeon-General George H. Torney of the United States Army, Surgeon-General Charles F. Stokes of the United States Navy, and the medical officers of the Army and Navy stationed at Philadelphia were the guests of the Medical Club at a reception held at Bellevue Stratford, June 17.——Dr. A. M. Richards of Northwestern University was elected professor of pharmacology at the University of Pennsylvania, and Dr. K. F. Meyer of the Transvaal, Africa, was elected assistant professor of veterinary pathology.——Dr. Louis A. Duhring, professor of dermatology, resigned from the University Staff on account of ill health.——Dr. and Mrs. Louis Somers have sailed for Europe on a two months' trip.

WISCONSIN

Marquette Medical Graduates.—The Medical Department of Marquette University held its graduation exercises, May 23. A class of forty-five was graduated.

Personal.—Dr. Mazyck P. Ravenel, Madison, has been appointed to represent the University of Wisconsin at the centennial celebration of the University of Berlin, October 10 to 13. He is also a delegate to the International Conference on Tuberculosis and the International Congress on Alimentary Hygiene and the Rational Feeding of Man which meets in Brussels.——The City Council of Milwaukee has confirmed the appointment of Dr. William Colby Rucker as health physician.——Dr. John M. Helgeson has been appointed health officer of Rice Lake.

GENERAL NEWS AND COMMENT

New Hospital.—A contract has been awarded to build a new reinforced concrete hospital at Fort McKinley, P. I. It is proposed to add one wing to the hospital each year until it finally develops into a hospital available for a brigade post. A double set of quarters for hospital stewards at Fort McKinley is also to be constructed.

Memorial Window Unveiled.—On May 8 an interesting service was held in the Hospital Church of St. Luke the Beloved Physician, Ancon, C. Z., when windows erected in memory of those who had lost their lives during the construction of the canal were unveiled by Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer of the Isthmian Canal Commission.

Tuberculosis Sunday Results.—The National Association on Tuberculosis reports that on Tuberculosis Sunday 4,000,000 people listened to 40,000 sermons and that 1,250,000 pieces of literature were distributed; one-eighth of all the church goers of the United States heard the gospel of health on that Sunday. Plans are under way to make Tuberculosis Sunday work more far-reaching next year.

Library Wants Sanitary Reports.—The New York Academy of Medicine is desirous of adding to its library the reports of the committees that have been appointed from time to time to investigate questions of public health, to the end that the results of their labors may be available to future workers. Among the topics on which information is desired are: Harbor pollution, the alcohol question, the prevention of tuberculosis, the prevention of occupational diseases, the sanitation of tenements and work-shops, the effects of prolonged hours of labor, the social evil and congestion of population. The Academy will be glad to receive copies of reports of this nature and also any information concerning the appointment, the name and work of committees or commissions engaged in this research. Communications may be addressed to Dr. Charles Mallory Williams, Executive Librarian, New York Academy of Medicine, 17 W. Forty-third Street.

Federation for Sex-Hygiene.—The American Federation for Sex-Hygiene was organized at St. Louis, June 6, by delegates from fifteen state and city organizations interested in the promotion of the education in sex matters. The following officers were elected: Honorary president, Dr. Charles W. Eliot, formerly president of Harvard University; president, Dr. Prince A. Morrow, New York City; vice-presidents, Rev. George R. Dodson, D.D., St. Louis, Prof. Charles R. Henderson, Chicago, Talcott Williams, Philadelphia, and Dr. Francis Green, California; executive committee, Drs. Robert N. Willson, Philadelphia, Donald R. Hooker, Baltimore, William F. Snow, Stanford University, Thomas N. Hepburn, Hartford, Edward Jackson, Denver, and Malone Duggan, San Antonio, Tex.; and Messrs. Wert W. Hallam, Chicago, Percy Warner, St. Louis, and Delavan King, Boston.

The purpose of the organization is "the education of the public in sex physiology and sex hygiene, and the study of every means, educational and sanitary, moral and legislative, for the prevention of certain sex diseases."

Visit of American Surgeons to England.—The following members of the American Society of Clinical Surgery sailed on the Mauretania Wednesday, June 22, for England; R. G. LeConte, G. G. Davis, J. P. Hutchinson, John Gibbon, C. H. Frazier, Edward Martin, *Philadelphia*; C. H. Peck, G. E. Brewer, J. A. Blake, *New York*; A. D. Bevan, L. L. McArthur, J. B. Murphy, M. L. Harris, Chicago; F. B. Lund, E. A. Codman, C. A. Porter, John C. Munro, Boston; Emmet Rixford, San Francisco; C. H. Mayo, Rochester, Minn.; G. W. Crile, Cleveland; Willard Bartlett, St. Louis, and J. M. T. Finney, Baltimore. The society will be entertained by the leading surgeons of England. The plan outlined is to spend ten days in the leading cities of England and Scotland, where a series of clinical demonstrations have been arranged by the leading surgeons of Great Britain. Among the social attentions to be tendered the surgeons are a visit to Oxford, where they will be entertained by Professor Osler, with a dinner at Christ church following, a cricket match at Lord's and a visit to the House of Commons. The tour is a unique one, but one that certainly will result, not only in bringing about a closer relationship between British and American surgeons, but also in an appreciation of the work that is being done that would not be possible under ordinary circumstances. Most of the party will return on the Lusitania, sailing from Liverpool July 9, although a few will extend their trip to the Continent.

Distribution of Anti-Meningitis Serum.—The Rockefeller Institute for Medical Research, which has been supplying the antimeningitis serum gratis for several years, has announced that it may discontinue, at any time after the expiration of the next six months, its preparation and distribution on a large scale. The consensus of medical opinion, based on the employment of the antimeningitis serum in widely separated epidemics of meningitis, is to the effect that it is of undoubted value in reducing the mortality and preventing the severe consequences of the disease. The serum is without effect in any other form of meningitis than that caused by diplococcus intracellularis (Weichselbaum) and its favorable action is most pronounced when it is applied early in the course of the disease. Hence it is desirable that state and municipal laboratories, engaged in the preparation of diphtheria antitoxin and allied products, should undertake the preparation of the serum and provide means for controlling the bacteriologic diagnosis of meningitis, as they now do diphtheria and some other diseases. Unless the bacteriological diagnosis is controlled by competent authorities, the serum will, undoubtedly, be applied in some cases of meningitis due to causes which are not subject to its action, and not a few cases of epidemic meningitis will be deprived of the benefits of its use. The serum is administered by being injected into the spinal canal by means of lumbar puncture, which operation is also required to secure the fluid for the bacteriological diagnosis; and several separate injections of the serum are required in treating a given case. The effective employment of the serum is likely, therefore, to be restricted on account of the experience and skill required in its administration and the high cost of the commercial product, unless the preparation, distribution and, when necessary, administration are undertaken by state and municipal authorities.

LONDON LETTER

(From Our Regular Correspondent)

London, June 4, 1910.

Physicians Oppose Even Moderate Use of Alcohol

The tendency of recent years has been to limit considerably the field of the utility of alcohol, and the amount consumed in the hospitals is a mere fraction of that consumed a few years ago. From time to time manifestos on the alcohol question signed by numerous and influential members of the medical profession have been published for the instruction of the public. They have generally been against the use of alcohol. A manifesto has just been issued by 101 doctors in North Wales, of whom 34 are health officers, to the following effect: "Recognizing the very serious injury to the national health caused by the present-day extensive over-indulgence in the various forms of alcoholic drink; recognizing also that the habit of over-indulgence is seldom if ever suddenly acquired, but grows gradually out of what is considered to be a moderate use, and generally in the belief that such moderate use promotes health, increases the power of work, prolongs life; convinced moreover that this belief is a dangerous delusion and one which prolonged observation and exact experiments of scientific men have conclusively proved to be so: We, the undersigned, appeal to all our medical brethren in North Wales to join us in an endeavor to discountenance the various popular errors that still largely prevail on this subject. We appeal to them especially not to give, or even seem to give, the sanction of their professional authority to any general employment of alcoholic drinks in cases of disease. We believe that these drinks are not necessary for the promotion of health; that they do not increase but on the contrary impair physical and mental efficiency, and that they do not prolong life."

Great Scheme for the Providing of Dental Aid

A philanthropist who desires to remain anonymous has placed at the disposal of a prominent official of the British Dental Association the sum of $1,000,000 on "philanthropy and 5 per cent." terms for the establishment of a national dental aid organization for the benefit of the lower middle and poorer classes of the community willing to pay small fees for dental treatment and appliances, but who are unable to pay ordinary fees—in short, for the establishment of dental hospitals for paying patients—a much-needed bridge over the gap between the dentist and the ordinary dental hospitals. The problem is an old one and has been under the consideration of the authorities for many years but hitherto has been insoluble owing to the difficulty of obtaining capital. Suggestions of State assistance have been put forward but the obvious objection arose that the class to be catered to are unwilling to be the subjects of State or other charity. At present the benefits of conservative dentistry are confined to the well-to-do and the very poor, who are treated free at the hospitals, while individuals in the large intermediate class are unable to obtain them. The need for some such scheme is shown by the deplorable condition of the teeth of people in Great Britain. The mouths of the English have become a by-word in Europe. From 70 to 90 per cent. of school children suffer from defective teeth and start life badly crippled and unfit for the public service. Sixty-four recruits for the army per 1,000 are rejected for bad teeth (11 in excess of the next most frequent cause—"under chest measurement") and nearly 3 per 1,000 are rejected after enlistment for the same cause. During the late South African War 3,000 men had to be sent home as unfit for active service in consequence of defective teeth, in spite of the presence of army dentists. Subject to acceptance of the offer, a start will be made at once by starting a clinic in London. If successful this will be followed by similar establishments in every important town. To secure success it will be necessary to obtain the cooperation of the medical and dental professions, and the active support of many societies working in the interests of national health and hygiene. Though the provision of a national dental service will be the main object, a second mission will be the teaching of prophylaxis by the employment of paid visitors and lecturers on the principles of dental hygiene.

The Dangers of Rag Flock

A government report just issued calls attention to a danger which has been discussed from time to time in the medical press without, however, the provision of any remedy. The substance known as rag flock which is used for the stuffing of the cheaper kinds of mattresses and upholstery is manufactured from all kinds of old rags. According to the report, the rags used are of the lowest grade and consist largely of cast-off clothing and strips of old carpet which may have been picked out from rubbish heaps. The rags are passed through a tearing machine termed a "devil." Although in this process much of the dirt is removed yet a large quantity remains. Dr. Farrar, one of the government inspectors, estimates that from 70 to 90 per cent. of the flock used for bedding and upholstery is neither washed nor sterilized, and the filthy nature of some of it is appalling. He states that old trousers often badly stained with urine and feces are among the commonest articles he has seen passed unwashed into the tearing machine. Some manufacturers purchase old beds and work up the contained flock, unwashed, with freshly torn material. Among other articles which are passed into the machine are surgical bandages and dressings, and stained towels. Another inspector, Mr. Warburton, reports that lice may pass through the machine without being crushed and though the adult animals would probably not survive any time in the bedding made from the flock their eggs would. Professor Nuttall and Dr. Graham-Smith have made pathologic experiments with flock and have by subcutaneous inoculation induced septicemia in mice. Dr. Farrar suggests that a standard of cleanliness for rag flock should be prescribed by law. He finds that there is no difficulty in discriminating between clean and dirty flock by chemical analysis. The average amount of chlorine in a liter of fluid prepared from washed flock he finds to be 6.5 milligrammes, and from unwashed flock 113 milligrammes. He suggests that 10 milligrammes of chlorin in one liter of wash prepared from the flock on regulated lines should be the permissible limit of impurity. Professor Nuttall and Dr. Graham-Smith agree that a bacteriologic standard is not feasible because the mere sterilization of flock would not remove the organic dirt.

Alcoholism and Offspring

The doctrine that alcoholism in parents is injurious to the offspring has been submitted to the test of investigation in the Francis Galton Laboratory for National Eugenics. The investigation has been conducted by Miss Ethel M. Elderton, Galton Research scholar in the University of London, assisted by Prof. Karl Pearson, F.R.S. More than 3,600 school children were examined and a comparison was made between those who had parents addicted to alcohol and those who had not. A higher death-rate was found among the children of alcoholic than among the children of sober parents. This was higher when the mother was alcoholic than when the father was. It appeared to be due considerably to accidents and gross carelessness of the parents. The mean weight and height of the children of alcoholic parents were found to be not inferior to those of the children of sober parents. The startling observation was made that the general health of the children of alcoholic parents was on the whole slightly better than that of the children of sober parents. There were fewer delicate children among the former and cases of tuberculosis and epilepsy were markedly fewer. The explanation given is as follows: The physically strongest in the community have probably the greatest capacity and taste for alcohol. Further, the higher death-rate of the children of alcoholic parents probably leaves the fitter to survive. Epilepsy and tuberculosis, depending on inherited constitutional conditions, will be more common in the parents of affected offspring and probably, if combined with alcohol, are incompatible with any length of life or size of family. Parental alcoholism was found not to be a source of mental defect in offspring. The relation, if any, between parental alcoholism and filial intelligence was so slight that no numerical value could be assigned to it.

PARIS LETTER

(From Our Regular Correspondent)

Paris, June 3, 1910.

Epidemic of Acute Poliomyelitis in Paris

During the session of May 31 of the Academy of Medicine, Dr. Netter, physician of the Trousseau Hospital at Paris, read a paper on the epidemic of poliomyelitis observed in Paris following the summer of 1909, and again in last January owing to peculiar climatic conditions at the beginning of the year. In comparing this epidemic with those of New York City in 1909, of Sweden in 1905, of Norway in 1906, etc., Dr. Netter emphasized especially the fact that great epidemics are usually preceded and followed by smaller epidemics and that epidemic outbreaks in various parts of the world coexist or very closely follow each other. Like cerebrospinal meningitis, poliomyelitis is sometimes very contagious, sometimes scarcely contagious at all. The mortality exceeds 10 per cent. Aided by Levaditi, Netter has been able to prove that serum of patients who have had infantile paralysis presents neutralizing properties toward the virus of poliomyelitis.

Election of Two National Correspondents to the Academy of Medicine

In its session of May 31 the Académie de Médecine elected as national correspondents Dr. Regis, adjunct professor in the clinic of mental diseases of the Bordeaux college of medicine, and Dr. Collignon of Cherbourg.

The First Assembly of French Hospital Interns

The first Congrès Français de l'Internat des Hôpitaux (mentioned in The Journal, March 5, 1910, liv, 804) opened May 12 at Bordeaux. The following resolution was adopted: "In view of the fact that the internship is universally considered an incomparable school of medical and surgical education of which foreign physicians are justly envious, this meeting adopts the unanimous resolution to defend the institution of the internship, obtained competitively, against all the measures which would tend to suppress or to diminish its prerogative."

As for the method of recruiting, the assembly resolved in favor of the mode at present in force, that is to say by *concours*, with the necessity of passing through the externship. The sense of the meeting was that foreign candidates may be admitted to compete for the externship and the internship, provided they furnish all the diplomas and other conditions required of French students.

As for the scientific organization of internship, the assembly adopted two resolutions, one in regard to the creation of laboratories for scientific research in the internship and the other to the effect that during their service interns should, at their request, be given leave for a year to make a journey for scientific study among the university cities and abroad, and that competitions should be held for purses of travel, either in France or abroad, the beneficiaries being under obligation to make a scientific report on a question decided in advance by them.

The second assembly of hospital interns will take place in Paris next year.

A New Regulation for the Sanitary Service of the Army in the Field

A new regulation for the sanitary service of the army in the field has just been prepared by a special commission, of which the medical inspectors-general Vaillard, Delorme, Claudet, and others, are members. This regulation is based on the following essential principles: (1) division of the regimental sanitary service into two parts, one of which is to follow the troops in action, while the other is to be stationed in the rear; (2) increase in the number and decrease in the weight of the ambulances, which are capable of being immobilized, or transformed into field hospitals by the addition of "sections d'hospitalisation;" (3) increase in the number of litter-bearers for the transportation of the wounded, under the command of physicians. Laws have previously made the sanitary service autonomous under the orders of the physicians; and according to these laws, everyone in the sanitary service was under the authority of the physicians. Physicians in the French army, however (unlike those in the German army, for instance), are not considered combatants although they have their designated place on the field of battle and in all wars many of them have been wounded by the enemy's fire. Not being combatants, their right to give orders and to exercise discipline over the members of the military transport service has been disputed. The new regulation grants to officers of the sanitary corps the necessary authority in this respect.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, June 1, 1910.

Details of the Death of Robert Koch

As you have already learned by telegraph, Robert Koch died May 27 at Baden-Baden. The apprehension which I already expressed in my first report of his illness many weeks ago was soon justified. A new attack of heart failure terminated his life. It goes without saying that one cannot adequately measure the importance of this gifted man in a letter and I may rightly assume that you will make a special tribute to the great master in your Journal. Surely in him we have lost one of the greatest physicians of the present time, indeed one may say without offense to anyone, the greatest, for no one has so impressed himself on the medicine of our time as Robert Koch. Since the present age of medicine may rightly be designated as the etiologic age, Robert Koch may be regarded as a creator of it. For while the foundation of modern bacteriology had already been laid by Pasteur and Lister, Robert Koch was the first to succeed by his investigations in securing a firm basis on which to build a system of infectious diseases in their etiologic relations. Inasmuch as his teachings also had secured the greatest results for public and social hygiene, the value of his lifework must receive a higher estimate than even that of a Rudolf Virchow. Sorrow at his death finds worthy expression in the entire civilized world as is shown by the dispatches. The two physicians who treated him, Professors Kraus and Brieger, of whom the latter, as is well known, is one of his most gifted pupils, make an extensive report in the *Deutsche medizinische Wochenschrift* regarding his last illness. In consideration of the interest that this clinical history possesses from a general scientific standpoint, I would like to give you an extensive abstract of it: Koch suffered from anginal symptoms since March, 1910, and for a year or more previous the pulse had been intermittent. The attacks which became steadily longer and severer, he overcame by his energy of will. Up to the last he worked daily from about 9 in the morning until 2 p. m. in the laboratory of the institute for infectious diseases and his ward in the Virchow hospital. Koch had for years considerable cough and occasional expectoration, but bacilli were never demonstrated. In the end of 1890 he passed through a severe left-sided pneumonia. During his tour in Japan, Africa and America he experienced no special difficulty.

Koch was never a heavy smoker nor addicted to the use of spiritous liquors, but he did not spare his body in any way during his travels and in his scientific work. He had once a severe attack of cholera and had repeatedly suffered from malaria and often had disturbances of the bowels. In the night of April 9, Koch without recognizable cause was attacked with heart failure of the severest kind. After a short sleep he awoke with a feeling of impending death, with heavy perspiration, severe dyspnea and vomiting. At the same time a sharp pain radiated from the precordium to the left shoulder. Immediately he noticed marked râles in the bronchi which were also evident to the bystanders. In this condition Brieger found him sitting on the edge of the bed with ice-cold extremities, in agonizing dyspnea, completely collapsed, but awaiting his end with a mind clear and composed. The pulse was thread-like with a frequency of about 80 (previously 58) and very irregular. An injection of morphin gave him relief after about fifteen minutes. He slept until 9 in the morning and then awoke with similar symptoms, specially the râles, the dyspnea and the heart weakness. Toward noon Brieger and Kraus examined Koch together. They found the condition better than in the night. The left ventricle of the heart was moderately hypertrophied. There was general edema of the lung with a frothy, serous and sanguinolent expectoration and a very frequent and irregular pulse. The heart tones were dull and faint. There was marked rigidity and contortion of all the palpable and visible arteries. The liver was slightly swollen, there was very slight increase of urine. It must be assumed that in consequence of disease of the coronary artery, a softening of the heart muscle had taken place. The next morning while the pain in the region of the heart had become especially severe a loud pericardial murmur could be heard. In addition there were marked hematuria and cylindruria. The temperature was somewhat raised one evening only. The friction sound disappeared after two days but a recognizable effusion of fluid did not occur. At the same time the urine regained its normal color, and was quite free from albumin and casts. At first the treatment consisted in the administration of digitalis, morphin and strong coffee, and the application of warm compresses to the region of the heart and to the feet and hands. Under this treatment a condition of comfort was secured which continued very satisfactorily for a week. The patient who at first had calculated that he would live three and later eight days acquired again a degree of courage, his appetite increased, the amount of urine rose to 1800 c.c. and the swelling of the liver was reduced. The pulse showed an average frequency of 60 and while the tension remained low the rhythm was good. The edema of the lung, however, was more obstinate and especially on the left side it continued and never fully disappeared. After the first week, the heart beat became for a few days unduly frequent, the pulse thin and very irregular and the edema increased. Treatment with digitalis also relieved this intermediate attack. After this the pulse rate was kept at 60, the tension of the pulse soon became much better and the blood pressure rose to 144 mm. Hg. The patient was able to be out of bed for days at a time. After May 14 he took several rides, received his friends and tried to read, to dictate and to carry on some literary work. Unfortunately the condition continued such that even with the moderate frequency of the pulse and a tolerable tension, the slightest emotion or light muscular effort, walking, etc., immediately produced marked acceleration of respiration.

A careful medical examination in the middle of May gave the following results: Arteriosclerosis, blood pressure 110-160 mm. Hg., normal rhythm (even with single ventricular extrasystoles), hypertrophy and dilatation of the left ventricle (as determined by the apex beat and the *x*-ray) enlargement of the left auricle. Murmurs in the heart were not again heard. The [illegible] showed a marked variation in the auricle [illegible]” was markedly negative. The glands at the root of the lung appeared to be markedly enlarged on both sides, the tracing of the hilus was abnormally sharp and the left lung was insufficiently clear in the lower section. In the region of the apices there were no shadows (*x*-ray). Koch stated finally that he had had an old tuberculosis but for the moment he was more easy with regard to his dyspnea, for he had no fear of tuberculosis.

Koch was a quiet, uncomplaining and obedient patient. He did everything that the physicians directed, observed himself with greatest interest, discussed the progress in the findings and preserved always a stoic tranquility. He was pleased as a child when with increasing appetite the porridge which he had become so fond of in England tasted good again. So soon as the conversation turned on scientific matters he forgot immediately all his suffering, his eye sparkled under his high brow and only his dyspnea reminded him of the limits assigned to his physical powers. The prognosis from the very beginning was unfortunately bad. The little improvement in the findings which made possible a life in the arm chair and short promenades in his room deceived no one. Koch very earnestly desired to escape from the confinement of his room to Baden-Baden, where his friend, Libbertz, was staying. He stood the journey very well at which he was very much pleased. May 27 an aggravation of the condition suddenly occurred, and after an attack lasting for a few moments, death followed. Following his directions the body was cremated at Baden-Baden. According to his wish flowers were omitted and the funeral was strictly private. With reference to memorial services which are to be held at Berlin no definite arrangement has yet been made.

Personal

Professor Hess, of Würzburg, has been called to Heidelberg as successor of Professor Leber in the chair of ophthalmology. Professor von Krehl is proposed as a successor of Curschmann. Whether Krehl, who is almost always called as successor when a chair for internal medicine is vacant in one of the German universities, will accept this call seems doubtful. He refused the proposal to become successor of v. Leyden, but possibly the chance to secure the position which his teacher formerly occupied may prove attractive to him.

International Union Against Tuberculosis

On May 22 the managing committee of the international association against tuberculosis held its meeting here under the presidency of the head of the imperial health office. Besides Germany there were represented Austria, England, France, Sweden, Holland, and Denmark. The discussions were on the lines on which the international tuberculosis conferences in Brussels and Rome shall be organized; also the participation in the international exposition that is to take place in Dresden was taken under consideration. Further, the suggestion was made to communicate the results of investigation of consumptives in the form of a set of uniform signs and abbreviations, and thus to facilitate the mutual understanding between the different civilized nations. Also, the question of international tuberculosis statistics is to be further investigated.

Discussion of Limitation of the Privileges Granted Foreign Students in the German Universities

Frequent complaint has been made of late years in the press that in consequence of the large ingress of foreign students, the native students at our universities and technical schools are deprived of the best places, and it has been urgently recommended that the excess of foreigners should be restricted. This subject was discussed a short time ago in the Prussian parliament. In this discussion the inconveniences that our native students suffer from the presence of foreigners, as well as the great value which the attendance at our universities possesses for foreign students, were thoroughly recognized. The Prussian minister of education expressed his opinion on this question, and it is well worth while for you and all those who desire to visit Germany for the purpose of study to learn the exact wording of the remarks which the minister made: "The Prussian universities have constantly regarded it as an agreeable duty imposed on them to assure hospitality to foreigners and to open to them as well as to our own youths the public lecture halls, so that they may draw from the wells of knowledge, learn German science, and return to their fatherland with the knowledge and impressions which they have acquired, where they have often become steady, true and valuable friends to us. To this policy we will still adhere, as it corresponds to the ancient tradition and to the high position which our universities, even today, still hold in the world." It is true that the minister added that in the case of institutions which demand considerable expense on the part of the state and where the question of room plays so great a rôle that it is possible to accommodate only a limited circle of hearers, it is probable that an increase of the fees for foreigners would be justified. This question will be investigated further by the department. In this matter a distinguished member of the parliament made the suggestion that an exchange of students might be arranged, similar to that which exists between the professors, and the desire was expressed especially that for German students who are studying in American universities the time that has been spent in Germany, and especially in Prussia, should be reckoned in the time required for attendance. The minister will give effect to this wish.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, June 3, 1910.

Death of Professor Zuckerkandl

One of the most famous medical men of the old Vienna school passed away a few days ago in the person of Prof. Emil Zuckerkandl, the well-known anatomist, whose loss is felt keenly by his numerous friends and pupils. Zuckerkandl's name is known all over the world in connection with his researches on the anatomy of the nose and its accessory sinuses, as well as his work on the anatomy of the brain, the nervous system and topography of the human body. He continued the important investigations of his teacher, Hyrtl, on the circulatory system of the vertebrate animals. Nearly all the practitioners of the present generation were his pupils, and his animated style of lecturing with digressions on artistic motives in anatomy, as well as his splendid teaching qualities, caused students to throng his classes. A special feature in his method of teaching was the intimate personal contact with his students in the dissecting-room, where he spent all his free time teaching, demonstrating, investigating and explaining. Zuckerkandl's career was very brilliant. Born in 1849 he soon turned to medicine, and Hyrtl, then the leading anatomist, at once recognized the qualities of a scientist in the young student. Five years after graduation (1879) he was appointed extraordinary professor of anatomy in Vienna, after having been privat-docent in Utrecht, Holland, for a couple of years. In 1888, after having filled the post of ordinary professor in Graz, he was asked to succeed Karl Langer in Vienna, and thereafter he maintained the high position of the Vienna school which his predecessors had founded. The enumeration of his papers and publications is unnecessary here. It is sufficient to note that he was the recognized leader of anatomy in Central Europe.

Postgraduate Instruction for Army Physicians in the Vienna Hospitals

The institution of postgraduate classes for practitioners has received the universal approval of all medical circles, and it has been resolved to make it a permanent feature of the teaching in our hospitals. The military authorities have also availed themselves of the opportunity thus offered to them by sending the medical officers of the home and the territorial force in turns to the postgraduate classes. Every military physician who has served at least 3 years is entitled to apply for 6 months' to 12 months' leave for the purpose of attending these classes. He is paid his full salary and the fees for the classes are paid for him by the government. He must satisfy the army board that he has profited by the teaching. He has to stay at least three months in one of the wards, taking his turn three or four times in different stations. For each year spent thus in hospital he has to remain at least 18 months longer in the army than the minimum time (6 years). These classes offer an excellent opportunity for the army physicians, and they flock to the hospitals. Surgery, ophthalmology, urology and rhino-otology especially are favored by them, while classes on bacteriology and sanitation, which are of such paramount importance for the army surgeon, are always crowded with these men. The facilities for learning are great, and the advantage of better promotion, increased knowledge and better pay are great inducements. Thus, in 1909, more than 260 regimental surgeons were enrolled in these classes.

Correspondence

The Layman's Reply to the Medical Freedom (?) League

The following is a copy of a letter sent to the leading newspapers of the country by Prof. Irving Fisher, president of the Committee of One Hundred on National Health. It will be interesting to see how many newspapers publish it:

To the Editor: Buying newspaper space appears to be the latest method of opposing a popular movement. Within a few weeks, three enormous advertisements, by a so-called "League for Medical Freedom," have appeared in newspapers throughout the country urging people to write their congressmen in protest against the Owen bill for a national department of health. Much to the amusement of congressmen, these advertisements have resulted in numerous telegrams, based on the absurd idea that the Owen bill aims to regulate the practice of medicine.

The result may be to aid, rather than hinder, the progress of the health movement. Already newspaper editorials—such as that which recently appeared in the *New York Times*—resent the buncombe of these advertisements.

But besides adding to the "gaiety of nations," this incident has created an appetite among the general public for more knowledge as to what this opposition signifies.

As president of the Committee of One Hundred on National Health, which was challenged in these advertisements, I wish to emphasize the following facts:

First: As the enclosed bulletin of the Committee of One Hundred indicates, the real strength of the opposition evidently comes from commercial interests, such as the quack medicine interests and others who have reason to fear the Food and Drugs Act. While Christian Scientists and other "drugless" cults are denouncing drug doctors and denouncing a "medical trust" which does not exist, these cults are themselves playing into the hands of a drug trust which does exist.

Second: Under our Constitution, the federal government could not, if it would, regulate the practice of medicine.

Third: The Owen bill contains no provisions aiming to regulate the practice of medicine.

Fourth: Section 8, in the Owen bill, the section authorizing the establishment of "chemical, biologic and other standards," has been eliminated entirely from the bill, although only a heated imagination could have construed this section as attempting to regulate the practice of medicine.

Fifth: Senator Owen did not prepare his bill at the instance either of the American Medical Association or of the Committee of One Hundred on National Health. It is true, however, that the American Medical Association and the Committee of One Hundred heartily endorse the bill in preference to any of the other numerous health bills now before Congress.

Sixth: The Committee of One Hundred on National Health is not a medical organization. It did not originate with the American Medical Association, but with the American Association for the Advancement of Science. It is allied with the American Medical Association only in the same sense that it is allied with labor organizations, farmer organizations, life insurance companies and various other agencies which are working to improve public health.

Seventh: While opposed to fraudulent quackery, which is always imposing "fake" medicines and cure-alls on the public, the Committee of One Hundred on National Health is not devoted to any particular school of medicine to the exclusion of others. Curiously enough, it was a Christian Scientist who moved the appointment of the Committee of One Hundred. Many members of our committee have been noted for their independence of conventional medicine, among them being ex-President Eliot of Harvard University; Mr. William H. Allen; Mr. Edwin Bok, editor of the *Ladies' Home Journal;* Mr. Horace Fletcher, Dr. Luther H. Gulick, President G. Stanley Hall, Mrs. John B. Henderson, Dr. J. H. Kellogg, Mr. S. S. McClure of *McClure's Magazine;* Dr. Richard C. Newton, who has called attention to some merits of osteopathy; and Mr. Nathan Straus. I may add that in my report on "National Vitality" to President Roosevelt, I put myself on record as favoring "medical freedom." I can endorse almost all of the position on that subject taken by Mr. Fowler.

Eighth: A department of health in America like the department of health in Germany, or anywhere else, will have better things to do than to regulate the practice of medicine. It will regulate the misbranding of foods and drugs (there's the rub!), the pollution of streams, the inspection of meats and quarantine and will obtain and distribute information in regard to health of human beings just as the Department of Agriculture does in regard to the health of hogs and cattle.

When the "League for Medical Freedom" suddenly appeared on the horizon, our movement had encountered substantially no opposition except among quacks and quack medicine proprietors. On the other hand, our movement has the support of the President, of both political parties, as expressed in their platforms, of scientific, philanthropic, medical and labor organizations and of the granges, as well as of the life-insurance companies, of Dr. H. W. Wiley of the Bureau of Chemistry and of General Walter Wyman of the Public Health and Marine-Hospital Service. The general public will find it hard to believe that these endorsements, especially the hearty endorsement of the life-insurance companies, can be in the interests of a "medical trust."

For further information, I would refer the reader to Bulletin 41 of the Committee of One Hundred about to be issued (address Drawer 45, New Haven, Conn.) to the Senate reports (Nos. 1 and 2) on hearings on S. 6049 (address Senate document room) to House reports of hearings on health bills, June 2-6 (address document room, House of Representatives) to Senator Owen's speeches (address Senator Owen) and to my report on National Vitality (Senate document 419).

Irving Fisher, President.
Committee of One Hundred on National Health.

Letters of the Late Dr. N. S. Davis Wanted

To the Editor:—Will you kindly request your readers to send me any letters in their possession written by my father, Dr. N. S. Davis, or, if they are unwilling to part with the originals, to send me copies. Moreover, if any of your readers know where such letters are I shall deem it a favor if they will inform me. Original letters written by my father or other matter of biographic interest will be preserved and ultimately permanently cared for by the Chicago Society of Medical History.

N. S. Davis, Jr., Chicago.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THUJA OIL IN CORNEAL OPACITIES

To the Editor:—Please give me information on thuja oil as used in corneal opacities, with especial reference to the amount of reaction it will cause, painfulness of the application and benefit from its use. One drop three times a day is recommended to be used. Is that too frequent? Will it be necessary to specify *Thuja occidentalis* in ordering, or is that the only variety used for oil? G. R. T.

Answer.—*Thuja occidentalis* is the only species of *Thuja* commonly used in medicine, and no doubt the oil from this species will be supplied when thuja oil is called for. The essential oil derived from *Thuja occidentalis* and other conifers (including the oil or spirits of turpentine) when dropped into the conjunctival sac sets up a sharp but transitory sclerocorneal congestion and thus stimulates absorption of certain opacities within the cornea itself. The effect thus produced is probably slight, and when the opacity is due to scar tissue, such oily irritants are of no value whatever. Indeed, the great majority of corneal opacities are not removed by this remedy, and it is certainly less valuable than massage with stimulating ointments, the use of thiosinamin and other remedies. If employed at all, thuja oil should be instilled once a day, one drop being put in every three minutes until three drops are used. If the pain and reaction are too great, the remedy should be diluted with sweet oil of almonds.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 18, 1910:

Holmes, T. G., M. R. C., Par. 2, S. O. 136, relieved from active duty in Medical Reserve Corps at expiration of 1 month leave of absence.

Brownlee, C. Y., major, Par. 3, S. O. 136, granted 3 months' leave of absence.

Siler, J. F., capt., Par. 6, S. O. 137, W. D., granted leave of absence for 1 month on or about July 1, 1910.

Pinquard, Jos., M. R. C., Par. 21, S. O. 137, W. D., relieved from duty at Fort Moultrie, S. C., and ordered to his home.

Pyles, W. L., capt., granted leave of absence for 3 months and 15 days on his arrival in the United States from the Philippine Islands.

Warriner, B. B., M. R. C., *ordered to U. S. Military Prison, Alcatraz* Island, Cal., for duty.

Buck, C. D., major, granted leave of absence for 1 month, to take effect on or about July 10, 1910.

Smart, W. M., capt., ordered from Fort Flagler, Wash., for duty.

Mills, F. H., M. R. C., ordered from Fort Flagler, Wash., to Fort Walla Walla, Wash., for duty.

Sheep, W. L., M. R. C., arrived at Fort Meyer, Va., for temporary duty.

Manly, Clarence J., major, ordered to accompany 25th Infantry from Fort Douglas, Utah, to Fort D. A. Russel Target and Maneuver Reservation, Wyo., for duty.

Morgan, N. D., cont. surgeon, ordered to accompany 4th Infantry from San Francisco to Fort Crook, Neb.

Pinkston, O. W., capt., ordered to proceed to Fort D. A. Russel, Wyo., for temporary duty.

Oliver, Robert T., E. & S. D. surgeon, relieved from duty at Fort Hamilton, N. Y., and ordered to the Philippine Islands, for duty.

Michie, H. C., Jr., M. R. C., ordered to Fort Myer, Va., for station and duty.

Eber, Albert H., M. R. C., on withdrawal of troops from Fort De Soto, Fla., will proceed to Fort Moultrie, S. C., for station and duty.

Clayton, Jene B., major, granted 14 days' leave of absence.

Dulin, Charles T., M. R. C., ordered to Army General Hospital, Fort Bayard, N. Mex., for observation and treatment.

Medical Corps, U. S. Navy

Changes for the week ended June 18, 1910:

Heneberger, L. G., medical director, ordered to command the Naval Medical School Hospital, Washington, D. C.

Harmon, G. E. H., medical director, retired, detached from command of the Naval Medical School Hospital, Washington, D. C., and ordered home.

Richards, T. W., surgeon, detached from the Naval Dispensary, Washington, D. C., and ordered to continue other duties.

Neilson, J. L., detached from the bureau of medicine and surgery, Navy Department, and ordered to duty at the Naval Dispensary, Washington, D. C.

Thomas, G. E., asst.-surgeon, detached from the *Wabash* and ordered to the *Paducah* and to additional duty with a marine detachment.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended June 15, 1910:

Lavinder, C. H., P. A. surgeon, granted 1 day's leave of absence en route in Europe, under paragraph 189, Service Regulations.

Vogel, C. W., P. A. surgeon, leave for 10 days from June 1, 1910, amended to read 7 days.

Bahrenburg, L. P. H., P. A. surgeon, granted 4 days' leave of absence from June 2, 1910, on account of sickness.

Kolb, Lawrence, asst.-surgeon, granted 7 days' leave of absence from June 9, 1910, under paragraph 191, Service Regulations.

Branham, H. M., acting asst.-surgeon, granted 4 days' leave of absence from June 14, 1910.

Friedman, H. M., acting asst.-surgeon, granted 2 days' extension of annual leave from June 4, 1910, on account of sickness.

Rodman, J. C., acting asst.-surgeon, granted 12 days' leave of absence from June 13, 1910.

Schwartz, Louis, acting asst.-surgeon, granted 7 days' leave of absence from June 6, 1910, under paragraph 210, Service Regulations. Granted 14 days' leave of absence from June 14, 1910.

Storrs, H. R., acting asst.-surgeon, granted 7 days' leave of absence from July 5, 1910.

Walkley, W. S., acting asst.-surgeon, granted 3 days' leave of absence from June 20, 1910.

Board of medical officers convened to meet at the Bureau June 20, 1910, for the examination of candidates for admission to the service. Detail for the [illegible] P. McIntosh, chairman; Surgeon W. G. Stimpson, [illegible] Surgeon A. M. Stimson, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Optometry Bill Vetoed in Ohio.

Evidently the governors of our states are having their eyes opened to the viciousness of the optometry bills which are occasionally passed by state legislatures. The bill passed in Maryland several weeks ago was promptly vetoed by the governor. In Massachusetts and New Jersey the bill was defeated in the legislature. The optometry bill which passed the Ohio legislature was vetoed by Governor Harmon in a message clearly stating his reasons for refusing to approve the measure. We commend Governor Harmon's message to the careful consideration of the governors in any other states in which such bills may be passed by the legislature. Governor Harmon says:

> "Amended Senate Bill 51, entitled 'A bill to regulate the practice of optometry,' creates a board of five members to examine and license persons to practice 'optometry,' which it defines as 'measurement of powers of vision and adaption of lenses for the aid thereof by any means other than the use of drugs, medicine or surgery.'
>
> "The express exemption of mere dealers in spectacles and eye glasses, and the requirement that the examination shall include 'anatomy and physiology of the eye,' as well as 'optics and such other subjects as said board may decide to be suitable and proper,' show that the proposed license is to cover something more than the mere commercial supplying of eye lenses to customers.
>
> EYE PART OF SYSTEM
>
> "That something is necessarily, from its nature, a part of the field covered by medical science. Our statute (G. O. 1286) includes in the definition of that field the prescribing, advising, recommending, administering or dispensing, for a fee or compensation, not only of drugs or medicines, but of appliances for the cure or relief of a bodily injury, infirmity or disease.
>
> "It is beyond question that the eye is so connected with the general system that the subject of impaired or imperfect vision cannot properly be considered as though it were an independent function, and it is conceded that, especially with children, the condition and needs of the eye cannot, in a great many cases, be known without the application of drugs for dilation, as well as the examination of other bodily conditions.
>
> LEADS TO GRAVE PERIL
>
> "So to set men who have not themselves had medical education and stood the careful tests required by law in the interest of the public health to examine and license others to deal with one of the most delicate and important organs appears to me a step downward leading to grave peril. And if what may be called the mere mechanical treatment of defective vision is to be made a special branch of medical practice, it should be under the jurisdiction of the state medical board, so that the proper qualifications may be judged by men of approved education and training in the general science which dealt with the ills of the human body.
>
> "But I know of no special branch of medical practice which is itself split up as is proposed here. All other special branches are complete in themselves, and no one is permitted to engage in them unless he is qualified to diagnose and deal with cases in all the aspects they may present.
>
> GREAT SKILL NEEDED
>
> "One who is not skilled in optical surgery and medicine surely cannot be safely trusted to tell whether these are not required instead of the mechanical treatment he is able to give, and the time lost in discovering the need of these will often make resort to them useless.
>
> "Schools of optometry are mentionel in the bill, but it is shown by the evidence presented to me that such as there are generally, if not always, lack of requirements of proper education for so important an art as treating the human eye. Many of them are mere correspondence schools.
>
> "It is true that dealing with vision ought to be strictly regulated, because, to common knowledge, much harm is done by itinerant and other persons who profess to supply the needs of the people. But I do not think this bill furnishes the proper means of regulation.
>
> PUBLIC WOULD SUFFER
>
> "On the contrary, by giving the authority of the state to many who lack the proper education and training, as this bill would, in my judgment do, the public would be misled as to their qualifications. Those so lacking would undoubtedly outnumber those who merely by special talent and practice would acquire a certain proficiency, as men do in all callings.
>
> "Druggists often gain a knowledge of diseases and their remedies as extensive as some physicians have, yet they are not permitted to apply that knowledge in practice, because such cases are exceptional.
>
> "For these reasons I herewith file the bill with the Secretary of State unapproved. Judson Harmon, Governor."

Homeopathic Society Endorses Owen Bill

The following preamble and resolution in reference to the Owen bill were adopted by the Homeopathic Medical Society of the County of New York:

> WHEREAS, In the public [illegible] ve been made that the practitioners of the [illegible] medicine are opposed to this bill, the Hom[illegible] of the County of New York, at its regular meeting, June 9, 1910, passed the following resolution:
>
> *Resolved*, That the Homeopathic Medical Society of the County of New York heartily endorses the proposed national Department of Health, feeling that such a department will increase the efficiency of state boards of health, and will produce a unanimity of action which is essentially lacking under the present conditions.
>
> WILLIAM FRANCIS HONAN, M.D.,
> President.
>
> JOHN STROTHER GAINES, JR., M.D.,
> Secretary.

Marriages

HOWARD KAHN, M.D., to Miss Florence Ring, both of Baltimore, June 8.

MAX LOUIS MENDEL, M.D., Chicago, to Miss Marie Hughes of Vicksburg, June 8.

WILLIAM CARVER FORDER, M.D., to Miss Annie Laurie, both of St. Louis, Mo., June 6.

ARTHUR G. HYDE, M.D., to Miss Carrie L. Cook, both of Cleveland, Ohio, June 15.

NORMAN HAYES PROBASCO, M.D., to Miss Olive Koons, both of Plainfield, N. J., June 7.

WILLIAM MACKEE CROSIER, M.D., Alexis, Ill., to Miss Louise Lafferty of Chicago, June 8.

DANIEL SEWARD BROSNAN, M.D., to Miss Mary Ruth Davis, both of New Orleans, June 13.

MURRAY A. RUSSELL, M.D., Washington, D. C., to Miss Louise Joyce of Chicago, June 9.

ISIDORE CHARLES RESHOWER, M.D., to Miss Miriam Cardozo, both of New York City, June 15.

ALPHONSE M. BODDEN, M.D., Milwaukee, to Miss May Genevieve Riley of Portage, Wis., June 1.

WILLIAM HAROLD WICKETT, M.D., Anaheim, Cal., to Miss Chapman of Placentia, Cal., June 4.

ANDREW HAVEN CLEVELAND, M.D., Boston, and Aurelia Puderer, M.D., of Belleville, Ill., June 8.

GEORGE RILEY TUBBS, M.D., to Miss Bessie Florence Whitehead, both of West Point, Ind., June 7.

JOHN MONTGOMERY GELWIX, M.D., to Miss Mary Sherman Crall, both of Chambersburg, Pa., June 1.

FREDERICK OSCAR TONNEY, M.D., Chicago, to Miss Clara Evelyn Sanborn of St. Paul, Minn., June 4.

LAWRENCE KOLB, M. D., U. S. P. H. and M.-H. Service, to Miss Lillian H. Coleman, at Baltimore, June 9.

JULIUS LAWRENCE MOGULESKO, M.D., New York City, to Miss Dora R. Salzenstein of Chicago, June 12.

WILLIAM CHASE MUDGETT, M.D., to Miss Edith Cecilia Heizmann, both of Southern Pines, N. C., June 8.

WILLIAM EDWIN BAYLOR, M.D., Cedar Bluff, Va., to Miss Annie Sylvester Doughty, at Cedar Bluff, June 8.

HENRY C. MADDUX, M.D., M. R. C., U. S. Army, to Miss Katharine R. Oliver, at Charlottesville, Va., May 20.

JAMES GLEN REA, M.D., Wellington, Kan., to Miss Frank Kathryn Tucker of Fort Madison, Iowa, May 11.

Deaths

Louis Clark Pettit, M.D. University of Pennsylvania, Philadelphia, 1883; formerly a member of the American Medical Association; American Medico-Psychological Association, and New York Academy of Medicine; for 23 years a member of the staff of the Manhattan State Hospital, Ward's Island, New York; a recognized authority on nervous diseases, and particularly paresis; died in St. Alexis Hospital, New York City, June 3, from arteriosclerosis, aged 52.

Richard Crain Dean, M.D. Jefferson Medical College, 1854; of Washington, D. C.; rear admiral U. S. Navy, retired on account of age limit, May 27, 1895, after ten years and nine months sea service and twenty-six years and two months shore duty; from 1870 to 1874 he was assistant chief of the Bureau of Medicine and Surgery; from 1876 to 1877 he was fleet surgeon of the North Atlantic Fleet; died at his home, June 9, aged 77.

Edwin Wilson Rhea, M.D. Jefferson Medical College, 1901; a member of the Medical Society of the State of Pennsylvania; one of the physicians in charge of the State Institution for the Feeble Minded of Western Pennsylvania, Polk; died in that institution, June 8, from specticemia, following appendicitis, aged 32.

John Philip Henriques, M.D. Yale University, Medical Department, New Haven, 1878, and valedictorian of his class; afterward graduated from the University of Heidelberg; died at his home in Edgewood, Providence, June 6, a year after an operation for gallstones, aged 53.

A. D. James, M.D. University of Louisville (Ky.) Medical Department, 1870; United States marshal for two terms, and congressman for two terms; died at his home in Penrod, Ky., June 7, from Bright's disease, aged 60.

Charles M. Johnson, M.D. University of Pennsylvania, 1850; a practitioner of St. Charles county, Mo., for more than fifty years and the oldest physician of the county; died at his home in St. Charles, June 7, aged 84.

Benjamin Helm Peabody, M.D. Cleveland Medical College, 1848; a surgeon in the Federal Army during the Civil War; died at the home of his daughter in Pittsburg, June 9, from heart disease, aged 85.

James Holmes Wikoff, M.D. New York University Medical College, New York City, 1854; a member of the Medical Society of New Jersey; of Princeton, N. J.; died at Atlantic City, June 8, aged 78.

Edgar C. Rankin, M.D. Kansas City Medical College, Kansas City, Mo., 1888; a member of the American Medical Association; of McLouth, Kan.; died at St. Mary's Hospital, Kansas City, June 1, aged 57.

Edmund Stevens, M.D. Albany (N. Y.) Medical College, 1898; deputy coroner of Ramsey county, Minn., of St. Paul; died at the City Hospital in that place, June 11, from pleuropneumonia, aged 34.

Carl August A. Bruck, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1896; a member of the State Medical Society of Wisconsin; died at his home in Milwaukee, June 10, aged 54.

Frank T. Lindsay, M.D. Howard University, Washington, D. C., 1875; a prominent colored practitioner of Xenia, Ohio; died in his office in that city, June 2, from heart disease, aged 54.

Henry R. Maxson, M.D. New York Homeopathic Medical College, 1880; of Nortonville, Kan.; a veteran of the Civil War; died at the home of his son in Cunningham, Kan., June 2, aged 71.

Carl Schilling, M.D. Missouri Medical College, St. Louis, 1880; a member of the American Medical Association; of Fort Wayne, Ind.; died at his home in that city, June 12, aged 56.

Henry R. Field (license, Mo., 1884); for 43 years a practitioner of medicine of Rockville, Mo.; postmaster in 1892; died at his home, May 19, from gastric ulcer, aged 72.

Daniel Merritt Griffen, M.D. College of Physicians and Surgeons, New York City, 1891; of Port Chester, N. Y.; died at Hot Springs, Va., June 3, from nephritis, aged 44.

William Carpenter Comstock, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1896; died at Sudbrook Park, Baltimore, June 5, from heart disease, aged 38.

Charles Frederick Moore, M.D. Rush Medical College, Chicago, 1888; a member of the Illinois State Medical Society; died at his home in DeKalb, June 10, aged 48.

Carl P. H. Buck, M.D. Copenhagen, Denmark; a resident of California since 1854, and a Civil War veteran; died in Santa Rosa, May 19, from mixed sarcoma, aged 75.

Edgar Martin, M.D. Cleveland Medical College, 1856; a pioneer practitioner of Huron county, Ohio; died at Norwalk, Ohio, June 8, from pneumonia, aged 84.

William H. Gibbs, M.D. Medical College of Virginia, Richmond, 1862; a Confederate veteran; died at the home of a nephew in Richmond, June 5, aged 75.

Warren Andrus James, M.D. Bellevue Hospital Medical College, New York City, 1865; died at his home in Brooklyn, June 2, from heart disease, aged 71.

Charles A. Burleigh, M.D. California Eclectic Medical College, 1889; of Forest Hill, Cal.; died at that place, June 3, from pneumonia, aged 47.

James Allman Dixon, M.D. Hahnemann Medical College, Chicago, 1884; died at his home in Bellaire, O., June 10, aged 53.

George W. Swartout (*license*, Mich., 1900, twenty-three years' practice); of Aurelius, Mich.; died at Ann Arbor, June 9, aged 80.

Charles Ferris, M.D. Pulte Medical College, Cincinnati, 1895; died at his home in College Hill, Cincinnati, June 4, from hepatitis, aged 35.

Lewis J. Fabian, (license, Pa., 1884); died in Philadelphia, February 23, from epithelioma of the tongue, aged 70.

Angus Macdonald, M.D. Boston University, 1876; died at his home in Boston, June 1, from pancreatitis, aged 65.

John R. Gardiner, M.D. Rush Medical College, 1876; died at his home in Wichita, Kan., May 27, aged 62.

Henry Thomas Simmons. Dr. Henry Thomas Simmonds, Shamokin, Pa., advises us of an error in the death notices of June 11. The deceased was not a graduate of the University of Pennsylvania, Philadelphia, 1908, nor was he located at Altoona, but was a senior student in Western Reserve University, Cleveland. The similarity of both christian and surnames was the occasion for this error.

Society Proceedings

COMING MEETINGS

Maine Medical Association, Bar Harbor, June 29-30.
New Jersey Medical Society, Atlantic City, June 28-30.

NEW HAMPSHIRE MEDICAL ASSOCIATION

One Hundred and Nineteenth Annual Session, held at Concord, May 12, 1910

The President, Dr. Frank Blaisdell, of Goffstown, presiding

Officers Elected

A list of the newly elected officers appeared in The Journal, May 28, p. 1795. Concord was chosen the next meeting place for May 11 and 12, 1911.

President's Address: Medicine in New Hampshire

Dr. F. Blaisdell reviewed the history of the association and gave a brief résumé of 120 years of New Hampshire medicine and the indebtedness of the state to the medical profession. He made special reference to Dr. Josiah Bartlett, the first signer of the Declaration of Independence after the President had signed it; Matthew Thornton, a member of the Continental Congress in 1776; David L. Morrill, United States Senator in 1824, also governor; Noah Martin, former senator and governor; the present governor, Henry B. Quinby; and United States Senator, Jacob H. Gallinger. He commended the work of the State Board of Health in securing the passage of a bill granting money to build a state sanatorium at Glen Cliff. He spoke of the need of more laboratories; also that its work should be extended to the prevention of loss of life by preventable accidents on railroads and in shops, to sweatshop methods, and poisoning while working with chemicals, the prevention of criminals and the physically unfit from marrying, and the sterilization of those whose children would only increase the criminal class. Reference was also made to Dartmouth College and its work for 112 years.

Secretary's Report

Dr. D. E. Sullivan: One of the principal events of the year was the visit, early in October, of Dr. J. N. McCormack of Kentucky. Chairman of the Committee on Organization of the American Medical Association, and I do not know of any one thing in recent years that has left such a profound impression on the minds of both the profession and the laity as the sentiments he expressed. Addressing the doctors in the day and the public at night in his characteristic forceful manner, he delighted large audiences at Keene, Claremont, Woodsville. Berlin, Laconia, Concord and Manchester. Our only regret was that other sections of the state were not favored. As was anticipated, the realization of the radical changes in our constitution and by-laws has not been accomplished without some misunderstandings. To-day, however, most of the county officers and members have a fairly definite conception of the essentials. I would suggest that you advise the component societies to have more frequent meetings; to combine the offices of secretary and treasurer, with a salary commensurate to the duties; and to have January 1 the beginning of the fiscal year.

The Owen Bill

On the recommendation of the Committee on Public Policy and Legislation. the following resolutions were adopted:

Whereas, Sanitary science has demonstrated its ability to protect and to prolong human life, we believe that the diversified federal activities for the public health interests of this great country, those now existing and those that could be inaugurated for the further protection of human life, should be assembled under a Department of Public Health; therefore

Resolved, That we approve the provisions of Senate Bill No. 6049, to establish a Department of Public Health, and we respectfully ask our senators and representatives in Congress to give due consideration to the voice of the New Hampshire Medical Society herein expressed.

Resolved, That the secretary of this society be directed to transmit a copy of the foregoing preamble and resolution to each of the New Hampshire senators and representatives in Congress.

Report of the Committee on History

It was agreed that the written transactions of the society and of the council from the organization of the society in 1791 to the year 1854, inclusive, be printed, same to be in the original phraseology, spelling, punctuation, etc., of the manuscript records. The committee stated the desirability of authorizing the full and complete indexing of the work, and of giving them authority to include a list of the members of the New Hampshire Medical Society from its organization to the present time. The treasurer suggested that the names of the members of the society be included up to the time of 1854 and the names of those who have joined since omitted.

Alcoholism

Dr. Harry E. Mygatt, Nashua: There is no greater evil, no more extensive and widely spread disease than that of alcoholism, with sociability one of the great causes. I do not believe that alcohol is a food. Alcoholism should be regarded as a disease producing vice and a vice-producing disease. It is a potent factor in the development of mental and nervous diseases, surpassing all other causes. Its treatment should be conducted along three lines, namely: Influences which incite or strengthen moral resolutions; medicinal; controlling enforced abstinence. The one *sine qua non* of genuine treatment is unconditional abstinence from everything intoxicant. The present treatment of inebriate offenders against the law is neither curative nor deterrent. He recommended the necessity of greater attention to neurotic and psychopathic indications, and advocated the enactment of laws providing their commitment to suitable institutions for scientific treatment.

Asthma in Relation to the Nose

Dr. Thomas W. Luce, Portsmouth: Some authors say asthma is never due to trouble within the nose, while some specialists claim all cases can be traced to the nose. Such extreme views are not accepted by the profession. In 1902 Dr. Alexander Francis of London, by cauterizing the septal mucous membrane, was able, in a large number of cases, to relieve asthmatic attacks. Cases with polypi constitute the least hopeful cases for permanent relief. In forty-two cases treated during the last three years results under this treatment were more satisfactory than any other ever employed. General treatment was not neglected and a number were given iodid of potash.

DISCUSSION

Dr. Charles C. Rogers, Farmington, commended the treatment.

Dr. Frank E. Kittredge reported cases of asthma cured, or greatly relieved, by operations on the nose, such as removal of polypi and correction of a deflected septum.

Incipient Pulmonary Tuberculosis

Dr. P. Challis Bartlett: It is apparent that the increased knowledge of this disease has made it a personal affair with everyone. It is, of course, needless to say that the earlier the diagnosis is made the greater the prospect of complete cure. Many cases of tuberculosis develop insidiously after an attack of pneumonia. Professor Fisher places the economic loss to a community for each death from tuberculosis at $8,000. The whole aim is to build up the body, thereby increasing the natural resistance, and only by the observance of the little details can this be done, with strict cooperation between the patient and physician. The patient should be told that there may be set-backs, but that by sticking to it most patients may look for a complete cure. We know that tuberculosis is preventable, and that education will reduce the number of cases very rapidly. The work that has been done in the last two decades has changed what was considered an incurable disease into a curable one.

DISCUSSION

Dr. J. M. Gile: I wish to refer briefly to the broad features of the great battle that is now on against this disease that has so black and so fatal a history. The weapon with which we fight the disease from now on is knowledge, and that knowledge is based on the fact that we know the life history of the germ that precedes the disease. Suppose to-day you could quarantine and should quarantine every individual and every animal that has active tuberculosis as you would quarantine like cases of leprosy. One generation in the human race would practically wipe out tuberculosis. In regard to the state sanatorium, it is established as an institution for educational purposes and for the taking of incipient cases that should be curable; so please remember the principle of the institution and do not send incurable patients.

Some Tendencies in Modern Medicine

Dr. John W. Staples, Franklin: It is in the rôle of preventive medicine that its greatest and most fruitful victories have been won. Every water supply and every milk supply must give an account in the laboratory of the work done in the body. This advancement in preventive medicine means that the valuable colleges must graduate less men and men better equipped. It means, without a rearrangement of value, a diminishing amount of income to take a strong stand in favor of adequate pay from town and city officers. I wish that conditions were such that no physician would do contract work, and I ask for a rigid examination as to the ability of patients entering hospitals to pay the physicians for his services. I wish to endorse the postgraduate course recommended by the American Medical Association.

DISCUSSION

Dr. Abram W. Mitchell, Epping: Without any question, medicine has so many tendencies that it would be impossible for a man to anticipate what a writer or speaker would take up. We are really in a stage of transition from methods ancient and methods modern. Medicine is now coming grandly and scientifically into its own as a more exact science, and I believe that our relations with each other and with our patients are changed and the change is not always due to us. I believe that the patient is learning to look on his doctor more as a pilot than a wrecker.

Dr. James B. Woodman, Franklin: Our public health officers will hold a more important place and will be better paid; will be given more authority, a broader scope and will be more efficient. All our state institutions will be given greater scope and will do more and better work. This means an enormous cutting down of disease and the gathering together of much of it that remains in large centralized institutions.

(To be continued)

CANADIAN MEDICAL ASSOCIATION

Forty-third Annual Meeting, held in Toronto, Canada, June 1-4, 1910

The President, Dr. R. J. Blanchard, Winnipeg, in the Chair

Addresses of welcome were delivered by Dr. Rine, Minister of Education for Ontario, representing the Provincial Government; Mr. Ward, representing the City of Toronto; and Dr. R. A. Falconer, representing the University of Toronto. The president for the year, Dr. Adam H. Wright, Toronto, was then inducted into office.

President's Address: Medical Education, the General Practitioner and the Surgeon

Dr. Adam H. Wright, Toronto, stated that the medical student of the present day was overburdened with subjects in his curiculum and that in order to develop into a useful medical practitioner he needed to be taught less and to learn more. Dr. Wright believed that not infrequently the modern surgeon was rather inclined to exhibit his own swill than to attempt to impart his knowledge to the medical student and to the general practitoner.

Report on Pasteurized Milk

Dr. Charles J. C. O. Hastings, Toronto, secretary of the milk commission appointed about two years ago by the Canadian Medical Association, presented the report. Dr. Hastings mentioned the large infant mortality in Ontario and in Canada generally and stated his belief, and the belief of the commission, in the merits of pasteurization, which he said, destroyed hurtful germs without impairing the nutritive qualities of the milk. The commission had cooperated with the milk dealers of Toronto so that a very considerable quantity of officially pasteurized milk and cream was now sold in that city. The outlook, he said, so far as a better milk-supply for Canada was concerned, was exceedingly hopeful.

Dr. Charles E. North, *New York City, was also in favor* of pasteurization. He said that out of 300 guinea-pigs he had inoculated with samples of New York milk, half of those inoculated with raw milk had died, one of those inoculated th commercially pasteurized milk, and none of those inocu- ed with certified milk.

Prof. A. McGill, *Dominion Analyst, said that before any* steps could be taken in the direction of legislating for a pure milk-supply, it was necessary that a specific definition should be made of pasteurized milk, which at present it was very difficult to correctly define.

J. G. Rutherford, Veterinary Director-General of Canada, *emphasized the necessity of stamping out tuberculosis in cows* if it were desired to eradicate the disease in the human species. Of course Dr. Rutherford is a firm upholder of the theory that *bovine tuberculosis is transmissible to man and is an advocate* of very drastic measures of prevention.

Address in Medicine: Bright's Disease

Dr. W. P. Herringham, Physician to St. Bartholomew's Hospital, London, Eng., said that nephritis should be a subject of especial interest to physicians in America, as, according to statistics, it is rapidly increasing in the cities of this continent. He dwelt on the fact that acute nephritis was very rare in England and that the disease generally had an insidious course. He pointed out that the presence of albumin in the urine was not the only symptom, nor the lesions of the glomeruli the only lesions, but that the greatest harm wrought by an attack of nephritis was the delicacy of the parts affected as a result, and the liability to recurrence. With respect to the exciting cause, Dr. Herringham said that it was almost impossible to dogmatize. A patient afflicted with Bright's disease might be compared to a town of which the drainage system is out of order. Diet was a very important factor of treatment, but although the nitrogenous constituents of food should be largely avoided, Dr. Herringham was not in favor of the diet being restricted to fish or being regulated on hard *and fast lines. He said that* light ordinary diet was satisfactory; and he had found that patients did better on flesh than on milk. Strict moderation should be observed as to quality in diet, but considerable latitude might be allowed as to variety. Exercise and fresh air were beneficial but exposure should be guarded against and warm clothing worn, especially *around the loins.* The chief object in serious cases should be to avoid uremia by exciting the excretions of urine. Milk was sometimes effective for this purpose and he employed saline diuretics, cardiac stimulants and alkaloids as circumstances seemed to indicate. Dr. Herringham said that according to his experience hematuria was most difficult to control. For the edema so often present, the safest way, if possible, was to drain by cannulas. Deprivation of salt was useful in some of the milder cases. Regarding the high blood-pressure, in those suffering with Bright's disease, the speaker said that he looked on this symptom as one of compensatory action and in young persons as not serious. The arteries of the young were elastic and capable of much tension. In old people, and after 50. high blood-pressure was dangerous for the obvious reason that the arteries were brittle and frail. In certain cases venesection might be valuable, and might prevent the poison in the blood *from passing* the bounds of tolerance. The wonderful point in connection with renal disease, in the opinion of Dr. Herringham, was not that the patients died, but that some of them *lived as long as they did live. Possibly* the continued presence of the poison in the system established a certain degree of immunity of its own.

Publication of Journal Recommended

The association council recommended that the association *should bring out a journal* of its own forthwith, with Dr. Andrew McPhail, of Montreal, as editor, which should absorb the *Montreal Medical Journal.* This recommendation was adopted.

Dominion Registration

Dr. T. G. Roddick produced an amended bill on Dominion registration. In this the principal change was that the *Dominion should not define the qualifications necessary for* matriculation in the study of medicine and for obtaining the provincial license, this, as formerly, being regulated by the *provincial authorities.*

Address on Surgery: Surgery of the Joints

Dr. John B. Murphy, Chicago, said that in joint injuries it was the capsule that gave the surgeon the most trouble. Considered from a pathologic standpoint, he said, the capsule was a non-vascular fibrous tissue, an inelastic structure difficult of dstruction and that its non-vascularity made inflammation of joints especially difficult to treat properly. Draining a joint was, as a rule, wrong because the endothelial layer was thereby destroyed. The object in order to save a joint from ankylosis was not to lay it open but to close it. By means of animal experimentation and by accurate observation of human subjects, Dr. Murphy thought that it had been demonstrated that inflammation of the joint was not rheumatic in character but metastatic, the rational treatment, therefore, was to relieve the condition which destroyed. Aspiration and not opening of joints was indicated. The aspiration should be done with formalin and glycerin or sometimes with turpentine. *Treatment should be pursued promptly before pathologic* processes had had time to effect their destructive work. He said that it might be taken as a surgical axiom that every acute infectious process in a joint could lead to ankylosis by pressure; to avoid this the limb should be kept extended. Formalin and glycerin should be injected seven or eight days before operative treatment of the patella and if this were done no effusion would occur.

Symposium on Exophthalmic Goiter

Dr. S. P. Beebe, New York, pointed out that Graves' disease was not always a functional disturbance of the thyroid gland. The hypertrophied condition of the gland varied considerably in different cases; its secretions also altered in type with the progress of the disease. As a matter of fact, clinical *conclusions often clashed with pathologic findings.* Laboratory studies showed that the exact conditions of exophthalmic goiter could not be reproduced in animals *although conditions* could be reproduced resembling these in most respects. Dr. Beebe uttered the warning that iodin was readily taken up by the gland in Graves' disease and unless caution were observed the clinical results might be fatal. A serum for the treatment of exophthalmic goiter had been prepared by inoculating animals with proteids *from human thyroid gland* and Dr. Beebe was understood to say that the limited administration of the serum had been attended with satisfactory results.

Dr. A. McPhedran, *Toronto, said that* the disease was not prevalent in Canada. In the General Hospital, Toronto, during the past five years there had been 55 cases out of a total of *8,000 medical cases; of surgical cases* there had been in the same hospital about 0.5 per cent. With regard to prognosis Dr. McPhedran was non-committal and he remarked that surgical writers were skeptical of the utility of medical treatment and statistics seemed to justify this attitude. Statistics, however, were naturally more favorable to the surgical side of the *argument than to the medical.*

Dr. F. H. Shepherd, Montreal, believed that surgical treatment of the disease was by no means ideal; he looked for a *vaccine or serum treatment* as the only rational mode of removing the cause. Surgical treatment, he said, often relieved and sometimes cured but physicians did not generally send patients to surgeons until the disease was too far advanced for operative measures to be wholly successful. He thought that the extremely excitable state in which sufferers from this malady were wont to be was the cause of many unsuccessful operations and he had tried, with some favorable results, the policy of operating without giving the patient a previous intimation of the decision to do so. When the operation is performed it should be done rapidly and the parathyroid should be left in position as nearly as possible.

In the discussion which followed the most important point brought out was that in a very large number of cases the tachycardia was not relieved by operation.

Address in Gynecology: Old and New Gynecology

Dr. Henry C. Coe, New York, praised the giants of the past, such as Lawson Tait, Sims, Emmet and Thomas, and deplored many of the modern operative fads which American gynecologists and obstetricians in particular had so blindly taken up. He pointed out that most of these bizarre operations had died a natural death. With the marvelous increase in skill in abdominal surgery, he said, there had been but little decrease in the death-rate from puerperal sepsis. Of course, this was more a question of aseptic surroundings than of surgical skill and was due to the fact that the housing of the poor in all large cities was still very defective. Prophylaxis should be the keynote of general medicine. Dr. Coe stated that he believed that marriage would one day be subject to state control. He said that this was no fanciful dream but well within the realms of practical politics.

Medical Education and Inspection

Dr. J. C. Connel, Kingston, Ont., proposed the appointment of a committee to deal with the subject of medical education. This was agreed to and a committee was formed. A report advocating the adoption of a system of medical inspection in all the schools of Canada was presented by Dr. John Stewart of Halifax and as a result a special committee was appointed to consider the question.

Election of Executive Council and Appointment of Officers

The following were elected for the ensuing year to the Executive Council: I. C. Fagan, Vielorid, B. C.; D. Ingersoll, Olmsted, Hamilton; George E. Armstrong, Montreal; A. I. Shillington, Ottawa; James Bell, Montreal; F. N. G. Starr, Toronto; J. T. Fotheringham, Toronto; J. H. Elliott, Toronto; John Stewart, Halifax; R. A. Reeve, Toronto; A. McPhedran, Toronto; Murray Maclaren, St. John, N. B.; Alex. McNeill, Charlottetown; J. D. Lafferty, Calgary; and F. G. Finley, Montreal.

The following officers of the Association were appointed for the coming year: President, Dr. George E. Armstrong, Montreal; general secretary, Dr. E. W. Archibald, Montreal; treasurer, Dr. H. B. Small, Ottawa; vice-president for Quebec, Dr. Simord, Quebec; local secretary, Campbell Howard, Montreal; finance committee: Dr. James Bell, Montreal; Dr. J. L. Fotheringham, Toronto, Dr. Murray Maclaren, St. John, N. B., Dr. S. J. Tunstall, Vancouver, B. C., Dr. F. N. Starr, Toronto, Dr. F. J. Blanchard, Winnipeg, and Dr. F. B. Finley, Montreal.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

June 11

1 [illegible] e Elbow After Fractures of the Lower [illegible] s. J. B. Roberts, Philadelphia.
2 [illegible] and Prophylaxis of Gastric and Duod- [illegible] l. Thomson, New York.
3 *Importance of Blood-Pressure in the Toxemia of the Latter Half of Pregnancy. J. C. Hirst, Philadelphia.
4 *Recent Psychologic Tendencies in Psychiatry. W. A. White, Washington, D. C.
5 The More Common Forms of Uterine Bleeding, and Their Treatment. S. W. Bandler, New York.
6 *The Injection of the Salts of Mercury and Arsenic During the Reaction Period Following Tuberculin Injections as a Treatment for Tuberculosis. C. A. Penrose, Baltimore.
7 The Immediate Repair of Injuries to the Pelvic Soft Parts Following Labor. J. O. Polak, Brooklyn.
8 *Appendicitis Associated with a Fetal Position of the Cecum in the Subhepatic Position. C. B. Ingraham, Denver.
9 Primary Tuberculosis of the Nose. S. Oppenheimer, New York.
10 Education and Instruction in Sexual Relations as a Prophylaxis Against Venereal Diseases. A. Ravogli, Cincinnati.

3. **Blood-Pressure in Pregnancy.**—In order to establish a standard of normal blood-pressure from which the deviations could be noted, Hirst has taken the blood-pressure of 100 non-pregnant women, showing no signs of any kidney or heart lesion likely to give misleading results. The average blood-pressure, according to Faught's instrument which was used, was 112 mm. The blood-pressure of 100 normally pregnant women was then taken, who at no time showed albumin or any constitutional sign of toxemia, and this pressure was found to be 118 mm. These figures hold good up to approximately seven and one-half months, past which date there is a gradual rise, so that in the middle of the last month of pregnancy, a fairer average is 124 mm. The blood-pressure increases slightly until subsidence of the uterus takes place, and from then there is no further increase, and frequently a slight fall.

In women showing symptoms of toxemia, however, the picture changes. The blood-pressure in 39 women with eclampsia and 18 who did not have eclampsia but had marked albuminuria at the time the first examination was made, was at its lowest, 142 mm. The highest blood-pressure recorded in a woman without eclampsia was 192 mm.; the highest in an eclamptic was over 320 mm., so high that the mercury ran out of the top of the tube before the pulse was shut off.

4. **Psychology and Psychiatry.**—White says that the greatest change that has come over psychiatric conceptions in recent years is the recognition of the necessity for individual psychologic analysis. As a result of this analysis there has been found a region of mind which is out of the field of complete conscious awareness. In the normal process of mental development constellations of ideas corresponding to frequently repeated adaptations are relegated to this region where they act more or less automatically thus leaving the upper strata free for new and unusual types of reaction. The field of full and clear personal consciousness is this field of new and unusual necessities for adaptation. The field of clear personal consciousness conditions relatively few of our mental states. The complex is a pathologic constellation which is repressed from full expression by the censor of consciousness. The compromise between the effort of the complex to gain expression and the censor to repress produces the phenomena of the psychoneuroses and of dreams. Dreams therefore become the royal road to the subconscious. It is no longer possible to dismiss a mental symptom by recording it or to dismiss a case by simply observing the obvious. Every symptom requires to be analyzed and traced to its ultimate and efficient cause. Only by such methods can it be hoped to help the patient by the application of a rational therapy.

6. **Mercury and Arsenic in Tuberculosis.**—With the hope that antiseptics would enable one to use larger doses of tuberculin without risk, and that the larger doses of tuberculin by their action on the tuberculous areas would insure better penetration of these antiseptics into such places, Penrose gave his patients from one-fifth to one-third of a grain of succinimid of mercury, hypodermically, every other day, until 30 injections had been taken and then started them in with small doses of tuberculin (old tuberculin) hypodermically until a good tolerance dosage was obtained, and then gave this usually every other day, alternating with mercury injections for fifteen days. After a variable period of rest from treatment, from fifteen to thirty days, he gave another course of the mercury alone, etc. He now finds it best to get the tolerance dose of tuberculin first in the untreated case and then he has a gauge as to the amount of tuberculin best to use after the mercurial course. This, he has usually found, is three to four times as large as the initial dose of tuberculin used before the administration of the mercury. In one case especially, Penrose was surprised to find that such a dose every other

day gave no general reaction, although one-fourth of this dose every four or five days before the mercury was started shot the temperature persistently up to 102° F. and more.

8. **Subhepatic Appendicitis.**—In Ingraham's case the patient first had uneasiness and fairly acute pain in the region of the stomach which shifted into the right side of the abdomen and became quite severe. There was some nausea, but no vomiting. The abdomen was rigid in the upper quadrant and soft in the lower. There was moderate tenderness just below the ninth and tenth cartilages, no tenderness whatever at or below the line from the navel to the anterior superior spine of the ileum. Because of the typical onset and pain in the epigastrium, shifting to the right side, the diagnosis of appendicitis was made, with the suggestion that the position of the rigidity and tenderness might be accounted for by the appendix pointing high or due to a high fetal position of the cecum. Operation was decided on.

A high right rectus incision was made, and after a fruitless search for the appendix in the right iliac fossa, the incision was prolonged upward and by following the transverse colon, the cecum was found lying over the right kidney and just below the liver margin. The appendix with a darkened swollen tip pointed upward and outward, arising from a point on the cecum anteriorly and toward the right. The cecum was attached and could not be brought out of the incision.

Medical Record, New York

June 4

11 Actinomycosis (Streptothricosis) in Man with Pulmonary Involvement. A. C. Wood and A. A. Eshner, Philadelphia.
12 Actinomycosis of the Cheek Following Injury by a Dental Instrument: Recovery. A. Stengel, Philadelphia.
13 *Diabetes Mellitus—A Sympathetic Neurosis Rationally Treated with Electricity. J. M. Liebermann, New York.
14 The Principles and Technic of the Wassermann Reaction. G. Gillman, San Francisco.
15 *The Treatment of Progressive Scoliosis. M. Strunsky, New York.
16 Three Years of Rabies in Indiana. J. P. Simonds, Indianapolis.

13. **Diabetes Mellitus.**—Liebermann regards diabetes mellitus as a neurosis dependent on disturbance of the nerve energy supply to the digestive system. There is a vasomotor paralysis of the splanchnic area, causing hyperemia of vessels about the liver. This is induced by injury or irritation of some nerve of the cerebrospinal system, or injury or irritation of the filaments and ganglia of the sympathetic system. Electricity properly applied will relieve this hyperemia. The high potential and high frequency currents are the proper ones to use. The indirect positive static spark or brush, with negative insulation, or the same polarity in high frequency effleuve is applied over the epigastric region and celiac plexus. It has a sedative, pleasant effect and causes sleep. The symptoms subside gradually and sugar disappears.

15. **Treatment of Progressive Scoliosis.**—Strunksky advocates a system of treatment of scoliosis which dispenses with the corset or other support as not only unnecessary, but harmful, and makes use of exercises in the horizontal position, with prolonged rest on the back. In this position deformity disappears, while in the upright posture it is present. At the same time everything is done to increase the tone of the nervous system and the general condition. He allows creeping exercises, and exercises of the shoulders and trunk in the horizontal position, with pelvis or body strapped to the table. There is a wider range of excursion for the vertebræ, a wider amplitude of muscular contraction, a tendency to restore the muscles to their normal length, and relief for the vertebræ from the superincumbent weight.

Boston Medical and Surgical Journal

June 9

17 Surgery in London at the Beginning of the Nineteenth Century as Observed by an American Surgeon of the Old School. J. C. Warren, Boston.
18 Frederick Irving Knight, M.D. E. F. Otis, Boston.
19 Charles Burnham Porter, M.D. J. G. Mumford, Boston.
20 The Teaching of Pathology by the Case System, Supplemented by Gross and Microscopic Specimens. T. Ordway, Albany, N. Y.
21 The Height of Flat-Foot Plates. H. O. Feiss, Cleveland, Ohio.
22 *Technic for Taking Casts for Flat-Foot Plate. H. Fitzsimmons, Boston.

22. **Taking Casts for Flat-Foot Plates.**—In Fitzsimmons' method the patient is placed seated or in dorsal recumbency on a table, the edge of which reaches to mid-calf. Two 5-inch plaster bandages enveloped in the original newspaper covering, with the free end of the bandage folded back for about one inch are placed in a dish of warm water, deep enough to cover it, and left there until no bubbles of air arise to the surface.

The bandage is then taken out of water and the paper removed. The free end for about 3 inches is unrolled and allowed to hang while the plaster is loosely held in one hand (right). With the other hand (left) the strip is grasped at the middle and placed on the dorsum of the foot over an imaginary line passing down the dorsum of the foot from midway between the two malleoli to the space between first and second toes. This strip is now fastened to the foot by circular turns of plaster, rapidly but smoothly, from the terminal joint of the toes to malleoli. When the bandage has been fastened it should be molded to the foot gently, without undue pressure, and the foot held at right angles to leg with toes neither flexed nor crumpled. This can easily be done by just holding the palm of the hand flat against the sole of the foot so that both the heel and the metatarsal pad and the toes are just lightly touched. The plaster thus applied will harden rapidly, and in a few minutes with a sharp knife, by exerting slight traction on the upper end of the folded strip, the plaster shoe may be split.

The second foot is now done in the same way, during which time the first shoe is left in place. After the second has been cut, the first is removed carefully, the cut edges approximated, and the mold sealed by taking the strip which has just acted as a director on which to cut, spreading it out, wetting it and passing it longitudinally down the dorsum of the mold over the split and over the opening where the toes had been and back to the heel. This strip is long enough and has retained plaster enough to effectually seal the mold. The second is now likewise treated. Thus a light, inexpensive mold, the materials for which are easily transported, may be made easily and accurately, one which holds its shape and does not break if dropped.

The cast is made by mixing about 2½ cups of good dental plaster with 1½ cups of cold water, which, when well mixed, is poured in through the ankle opening. If the sealing strip has been started at the proper level (about 1 inch below the level of the malleoli) the mold will have a broad, flat base, which is preferred by the plate makers.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 28

1 Treatment of Injuries of the Heart. J. Bland-Sutton.
2 Probable Ovarian Pregnancy. B. Whitehouse.
3 *One Thousand Cases of Instrumental Labor, with Four Deaths in a Colliery Practice. I. Crawford.
4 Large Simple Ovarian Tumor Removed from a Girl. G. McMullen.
5 Spinal Analgesia and Pituitary Extract for Forceps Delivery During Acute Pneumonia. J. A. H. White.
6 Ophthalmic Conditions Caused or Influenced by Diseases of the Upper Respiratory Tract. A. S. Cobbledick.
7 An Intraneural Cyst of the Eighth Cervical Nerve. R. B. Etherington-Smith and E. H. Shaw.
8 Tracheotomy During the Administration of Nitrous Oxid Gas. H. Relph and F. Rood.
9 The Preparation of the Skin for Operation by Means of Dichlorid of Ethylene and Iodin. A. J. Wallace.
10 Exophthalmic Goiter. F. P. Sturm.

3. **Instrumental Labor in Colliery Practice.**—Crawford gives in this article a summarized report of 1,000 cases of labor, practically consecutive, in which instrumental interference was necessary. He had four deaths in the series; thirty craniotomies; two face presentations, both of the favorable type; one brow presentation, requiring craniotomy; twelve transverse presentations, three of which occurred consecutively in the same patient and one anencephalic monster requiring forceps, as what represented the head would not engage in the pelvis. In discussing the frequency with which instrumental interference

is indicated among this class of patients, he states that there are two curious opinions current among the older midwives: (1) that if you have to attend a patient who by reason of her occupation has been "chained to a chair" you always get a badly ruptured perineum; (2) that instruments are undoubtedly called for more often now than formerly. The last opinion is based on the assertion that the babies are larger now than formerly, and that the parents get better food and take life more easily than of old.

Lancet, London

May 28

11 Lymphatic Edema of the Leg and Foot with Cyanosis and Drop-foot. H. Morris.
12 Evolution of the Pelvic Floor in the Non-Mammalian Vertebrates and Pronograde Mammals. R. H. Paramore.
13 Two Cases of Poisoning by Coal-gas from a "Geyser," one of which Ended Fatally with Mental Symptoms. A. J. Hall.
14 Unruptured Tubal Pregnancy of Thirteen Months' Duration: Operation and Recovery. J. Morris.
15 Intracranial Complications of the Middle-Ear Disease. A. J. Hutchinson.
16 *The Specificity of Cancer and the General Principles of its Treatment and Prophylaxis. A. T. Brand.
17 The Demonstration and Study of Spores in the Schizomycetes. A. F. S. Kent.
18 Cephalic Tetanus (Kopf-tetanus of Rose). C. V. Kebbell.

16. **Specificity of Cancer.**—Believing that "no disease more plainly bears on itself the impress of specificity than cancer," Brand is of the opinion that the successful attack on cancer can be made only by specific means. He maintains that as syphilis yields to internal specific treatment so will cancer when once the specific parasiticide or vaccine, as the case may be, for cancer has been discovered. He submits that the proper treatment of cancer will consist in the removal by surgical means of accessible tumors, especially those which threaten life from mechanical causes, combined with the internal administration of specific remedies—when discovered. The latter will be relied on to check the further spread of the disease and to neutralize that already existing by destroying the causal parasite. No less important, he believes, than the curative treatment of cancer is the prophylactic. This he considers to consist in cremation of cancerous cadavers, the destruction of all dressings from cancerous wounds, and of all discharges and dejecta from cancerous patients, preferably by fire; thorough disinfection of all rooms and houses inhabited by those suffering from, or who have died of, cancer; avoidance of intimate personal contact so far as possible and possibly total abstinence from all uncooked fruits and vegetables. Finally he would have enforced the notification of all cases of cancer.

Sêmaine Medicale, Paris

May 25, XXX, No. 21, pp. 241-252

19 Xanthoma Result of Excess of Cholesterin in the Blood. (Pathogénie du xanthelasma.) A. Chauffard and G. Laroche.

Berliner klinische Wochenschrift

May 9, XLVII, No. 19, pp. 869-912

20 *Diagnosis and Treatment of Syphilis on Basis of Latest Researches. A. Buschke.
21 Appearance of Large Mononuclear Non-granulated Cells in the Blood in Chronic Myelemia after Roentgen Treatment. N. v. Jagic and P. Neukirch.
22 Comparison of Technics for Determination of Tubercle Bacilli in the Sputum. (Vergleichende Untersuchungen über den W und der Doppelmethode von E hweis von Tuberkelbacillen Ir
23 Ret Bacilli in Flowing Waters. (Zur Frage der Vernichtung von Tuberkelbacillen durch Flussläufe.) F. Jessen and L. Rabinowitsch.
24 *The Meiostagmin Reaction in the Service of Surgery. S. d'Este.
25 Experimental Research on the Influence of Various Local Therapeutic Measures on Inflammation. (Einfluss der lokalen Behandlung auf die Entzündung.) J. Schäffer. Commenced in No. 18.
26 Danger from Tuberculous Animals Comparatively Slight in Comparison to the Danger from Tuberculous Human Beings. (Welche Gefahr droht dem Menschen durch das tuberkulöse Tier?) B. Möllers.

20. **Syphilis in Light of Recent Research.**—Buschke concludes this postgraduate lecture with the statement that the most important element for the diagnosis and prognosis of syphilis is still as of yore careful clinical observation; the results of modern research have only made the foundation for this a little more solid. Treatment to date has not profited by recent research. Mercury and iodid are still the sole reliance in treatment of existing manifestations and their value in prophylaxis of tardy developments is still dubious.

24. **The Meiostagmin Reaction in Surgical Disease.**—This reaction was discussed recently in an editorial in The Journal, May 28, page 1790; d'Este here describes its application for differentiation of surgical tuberculosis, cancer, hydrocele, hernia, etc. He tabulates the details in about 35 cases, with the controls. They seem to show that this reaction can be counted on in the diagnosis of active tuberculous lesions but that it is not observed with merely latent processes. The findings were invariably positive in the cancer cases.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXI, No. 4, pp. 557-728. Last indexed April 30, p. 1487

27 *Inflammatory Tumors of the Sigmoid Flexure. L. Arnsperger.
28 *Tumor in Spinal Cord, in Cerebellum and in Arm, Studied from Neurologic and Surgical Standpoints. S. Auerbach and S. Brodnitz.
29 *Purulent Pneumococcus Bursitis and Tendovaginitis in Young Children. (Paraartikuläre Pneumokokkeneiterungen im frühen Kindesalter.) L. Kaumheimer.
30 Extrapleural Thoracoplastics in Treatment of Bronchiectasia.
31 * (Hirschsprungsche Krankheit.) R. M. Muskens.
32 * Research on Chronic Intoxication from Perverted Thyroid Functioning. (Ueber chronische Thyreotoxikosen.) S. Kostlivy.
33 The Motor h, Especially after Pylorectom Ueber die motorische Funktion d

27. **Inflammatory Tumors at the Sigmoid Flexure.**—Arnsperger states that in these tumors operative treatment is indicated if for no other reason than that they simulate cancer so deceptively. He operated in a case of the kind on assumption of carcinoma of the sigmoid flexure, but the lesion proved to be merely a simple, chronic, inflammatory process in the subserous tissue leading to partial dissection of the layers of the bowel wall, with signs of a more acute process in the serosa, mucosa and muscularis. Another case of the kind came to autopsy. The lesions are distinguished by the sharp demarcation from sound tissue and their hard consistency with tendency to adhesions. The mucosa may remain intact and free from stenosis.

28. **Operations on the Nervous System.**—The history, the differentiation of the lesion, the operative findings and the complete recovery are analyzed both from the neurologic and surgical standpoints in the case of intradural fibroma reported. The fibroma was in the upper dorsal and lower cervical segments of the spinal cord and had caused paralysis of the legs, with some retention of urine and tonic spasms as violent as in tetanus. Intermittent neuralgic pains in the region of the tumor had been noted with increasing severity for six years but there was no local tenderness. The operation was done in two sittings with four days' interval; it was followed by flaccid paralysis for six weeks, but this gradually subsided and by the end of the year there was no trace of the former disturbances. The writers describe further their experiences with a glioma in the left half of the cerebellum of a girl of 12. As the operation was attempted there was profuse hemorrhage from an aneurism, and it was arrested only by plugging with wax a defect in the bone. Vomiting, Cheyne-Stokes breathing and stupor developed later and the patient succumbed in the course of eleven hours. It is possible that the loss of blood permitted the large tumor to press on the medulla oblongata, inducing the vomiting and abnormal breathing, the condition thus comparable to the mishaps after lumbar puncture in case of brain tumors. In another case reported, a neurofibroma was removed from the upper arm of a young man, leaving a defect 5 cm. long in the ulnar nerve, and yet there were no symptoms of impaired motor functioning afterward; collateral nerve routes must have developed during the gradual growth of the tumor.

29. **Pneumococcus Bursitis and Tendovaginitis.**—Kaumheimer reports four cases in which abscesses developed in the bursa of the shoulder and knee and, in one case, in the tendon sheaths of the wrist and ankle. The joint itself was not involved, and pneumococci were cultivated from the pus in each case. The patients were infants one and two years old; one giving a positive tuberculin skin reaction succumbed to measles not long after, the others promptly recovered. Kaum-

heimer was able to find on record only four similar cases of pure para-articular pneumococcus suppuration, and in each the bursa of shoulder or knee was the first affected, especially the subdeltoid bursa. There had been preceding pneumonia in only one of his cases, but there was a history of recent otitis media in another case.

31. **Congenital Megacolon.**—The features of the three cases described indicate that the trouble was the result of a congenital valve-like protrusion of the wall of the large intestine into the lumen, two such protrusions overlapping and closing the lumen completely at times. In 58 cases on record in which an operation was done only 25 of the patients survived, but the operation had generally been delayed until pronounced ileus had developed. In the cases reported, the autopsy or operative findings confirmed the above assumption of the cause of congenital megacolon.

32. **Chronic Intoxication from Abnormal Thyroid Functioning.**—Kostlivy has been conducting extensive research to ascertain whether the true and incomplete forms of exophthalmic goiter are different entities, and has examined 42 patients with thyroid disturbances, including 9 with pronounced exophthalmic goiter, recording the blood picture, the hemoglobin percentage, leucocytosis and coagulating time, dilatation of the pupil after instillation of epinephrin, also testing the blood serum for epinephrin content, with experimental work. His conclusions are that there seem to be two distinct types of chronic intoxication from perverted thyroid functioning, one depending on the sympathetic system and the other on the vagus system. In exophthalmic goiter the two types may be combined; the vagus type predominates during the remissions and the sympathetic type predominates during the exacerbations. The sympathetic hyperthyroidism is the primary, the vagus type being more of a secondary compensating process, but it may assume the preponderance in time. The morbid functioning of the thyroid which entails this modification in the tone of these antagonistic nerve systems may be the result of infectious or bacteriotoxic influences. There may be isolated patches in the thyroid in which the secretion is perverted while the balance may be sound; this assumption would explain the cases in which, after removal of part of the enlarged thyroid, severe acute symptoms of hyperthyroidism develop. The sound parts had been removed by the operation, leaving merely the islands of abnormally functioning tissue. Such cases have been reported by Kocher and others, and two of Kostlivy's cases were of this type, the acute postoperative exophthalmic goiter symptoms proving rapidly fatal. In 3 of his other cases a similar acute and severe postoperative predominance of the sympathetic element was observed but gradually subsided. In 4 others an acute postoperative predominance of the vagus element was unmistakable. The postoperative predominance of the vagus element is not so dangerous as that of the sympathetic; he advises abstention from surgical measures in all cases of exophthalmic goiter in which extreme lymphocytosis and slight epinephrinemia indicate that the thyrotoxic poisoning is the work of small patches of abnormal tissue in the gland while the main part of the thyroid is in a vagotropic compensating hypertrophy. Strumectomy in such a case is liable to be followed by serious acute Basedow symptoms, almost inevitably fatal. This assumption of a disturbance in the coördination of the vagus and sympathetic elements as the basis of the "thyrotoxicoses" suggests the possibility of successful serotherapy, giving a hypothyroidism serum or hyperthyroidism serum as indicated in the individual case. This individualized serotherapy might prove useful also as a supplement to operative treatment. In conclusion he urges not to restrict operative measures to the severest cases, and postpone them until after failure of all internal treatment. The incipient thyrotoxic disturbances are most amenable to surgical treatment and give the best results as the primarily affected parts are removed before they have had a chance to do irreparable damage. Later than this, the outlook is far less encouraging on account of the changes induced by compensating processes not only in the thyroid itself but in the other ductless glands coordinated with the thyroid or antagonistic to it.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 12, XXXI, No. 57, pp. 601-608

34 Kala-Azar in Italy. (Di una nuova tripanosomiasi dell' uomo.) P. Barabaschi.

May 15, No. 58, pp. 609-624

35 Primary Sarcoma of the Spermatic Cord. (Sarcomi primitivi del funic [illegible] lso.
36 Accessory [illegible] Della così detta "concausa" in tema [illegible]

May 17, No. 59, pp. 625-632

37 Woody Phlegmon. (Contributo allo studio del flemmone ligneo di Reclus.) A. Duse.

Hospitalstidende, Copenhagen

April 6, LIII, No. 14, pp. 385-416

38 *Typhoid Bacillus-Carriers. (Tyfusbacilbærerne.) T. Madsen.
39 Tuberculin in Treatment of Pulmonary Tuberculosis. (Nogle Resultater af Tuberkulinbehandling ved Lungetuberkulose.) E. R. Schneider. Commenced in No. 13.

38. **Typhoid Bacillus Carriers.**—Madsen emphasizes the importance of keeping typhoid patients in the hospital until they are entirely free from bacilli. He adds that if they could be reexamined six or twelve months afterward, especially the adult women patients, much would be gained. If bacilli are discovered, the carrier should be instructed in prophylactic measures but with great care not to inform others of the positive findings, as most serious results may follow the knowledge in the environment. Only when the carrier refuses to submit to prophylactic measures should more drastic steps be taken. He urges search for the source of infection in every case of typhoid fever, and that the district physician should be informed when a known carrier is in his jurisdiction, so that he can keep him under supervision. The carriers that have proved most dangerous are women engaged in household work. In one such case recently, the mistress of the house in the course of years had infected a number of persons in turn, mainly newly arrived servants.

Ugeskrift for Læger, Copenhagen

May 12, LXXII, No. 19, pp. 533-566

40 Experiences with Empyema at the Copenhagen Hospital. (Empyemer paa Kommunehospitalets I. Afdeling.) E. A. Tscherning.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A Manual of Midwifery. For Students and Practitioners. By Henry Jellett, M.D., King's Professor of Midwifery in the School of Physic, Trinity College, Dublin. With the Assistance in Special Subjects of W. R. Dawson, M.D., H. C. Drury, M.D., T. G. Moorhead, M.D., and R. J. Rowlette, M.D. Second Edition. Cloth. Price, $6 net. Pp. 1210, with 557 illustrations. New York: William Wood & Co., 1910.

Diseases of Infancy and Childhood: Their Dietetic, Hygienic and Medical Treatment. A Text-Book Designed for Practitioners and Students in Medicine. By Louis Fischer, M.D., Attending Physician to the Willard Parker and Riverside Hospitals of New York City. Third Edition. Cloth. Price, $6.50 net. Pp. 980, with 303 illustrations. Philadelphia. F. A. Davis Company, 1910.

Essentials of Laboratory Diagnosis. Designed for Students and Practitioners. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Second Edition. Cloth. Price, $2 net. Pp. 336, with illustrations. Philadelphia: F. A. Davis Company, 1910.

Handbook of Anatomy. Being a Complete Compend of Anatomy, Including the Anatomy of the Viscera and Numerous Tables. By James K. Young, M.D., Professor of Orthopedic Surgery, Philadelphia Polyclinic. Third Edition. Cloth. Price, $1.75 net. Pp. 402, with 172 illustrations. Philadelphia: F. A. Davis Company, 1909.

Hygiene and Morality. A Manual for Nurses and Others, Giving an Outline of the Medical, Social and Legal Aspects of the Venereal Diseases. By Lavinia L. Dock, R.N., Graduate of Bellevue Hospital Training School. Cloth. Price, $1.25 net. Pp. 200. New York: G. P. Putnam's Sons, 1910.

Introduction to the Analysis of Drugs and Medicines. An Elementary Handbook for the Beginner. By Burt E. Nelson, Chemist to the New York State Hospitals. First Edition. Cloth. Price, $3 net. Pp. 384, with 31 illustrations. New York: John Wiley & Sons, 1910.

Age Incidence, Sex, and Comparative Frequency in Disease. By James Grant Andrew, Bachelor of Medicine and Master of Surgery. Cloth. Price, $4.20 net. Pp. 430. New York: Paul B. Hoeber, 69 E. 59th St., 1909.

GENERAL INDEX

All *reading matter* in The Journal from January to June, 1910, inclusive, is indexed here. (For Current Medical Literature Index see pages 2174 to 2228). "Deaths," "Book Notices" and "Society Proceedings" are indexed under those titles at the ends of the letters "D," "B" and "S." Matter pertaining to the Association is under "American Medical Association." With the above exceptions, all matter is indexed under the most important word of the heading that was used in The Journal, and also under the subject heading. For instance, "abscess of brain" will be found indexed under "abscess" as well as under "brain." Such titles as "ocular manifestations, etc.," have been indexed under "eye." Cross references have been made wherever this was possible. It is well to remember that, in looking up a certain subject, related words should be consulted, for example, testes, testicle; skull, cranium; bowel, intestines. The letters used to explain in which department the matter indexed appeared are as follows: "E" editorial; "O" original article; "C" correspondence; and "ab" denotes an abstract of an article that has appeared in full elsewhere. *Names of Authors* of original articles appearing in The Journal are not given in this index, but are included in the Index of Authors.

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SOCIETIES

Abbreviations:

Acad.—Academy.
Am.—American.
A.—Association.
Conf.—Conference.
Cong.—Congress.
Internat.—International.
M.—Medical, Medicine.
Pharm.—Pharmaceutical.
S.—Society.
Surg.—Surgical, Surgery, Surgeons.

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CURRENT MEDICAL LITERATURE

INDEX OF SUBJECTS

Explanation: This index refers to the titles and the subjects of original articles published in the leading medical journals of the world, including The Journal, during the past six months. The reading matter which appeared in The Journal is not indexed here, except the original articles and the abstracts of original articles. The titles of the articles and the names of the journals in which they appeared were listed weekly in the Department of Current Medical Literature, and it is to them that references are here made. The figure in parenthesis refers to the paragraph; the number following, to the page in The Journal. For instance, "Acne bacillus, (11) 78—ab," refers to page 78 of The Journal, on which is found, in paragraph numbered 11, the title of the paper and the name of the author, viz., "Bacillus of Acne, H. F. Hartwell and E. C. Streeter." This title is listed under the journal in which the article appeared, the *Boston Medical and Surgical Journal*, Dec. 16, 1909. When "ab" follows a page number it indicates that the article was abstracted in The Journal; for instance, "Abdominal cavity, pus in, (92) 1581—ab." On page 1581, paragraph 92, will be found an abstract of this article, which appeared in *Annals of Surgery*, April, 1910. Titles of articles which appeared originally in The Journal are indicated in the index by an asterisk (*) before the page number; for instance, "Abdominal drain, new, *1499," refers to page 1499 of The Journal, on which is found the complete original article. The index *to authors* of all articles, both original and those listed under Current Medical Literature, appears separately on pages 2229 to 2244 of this index.

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